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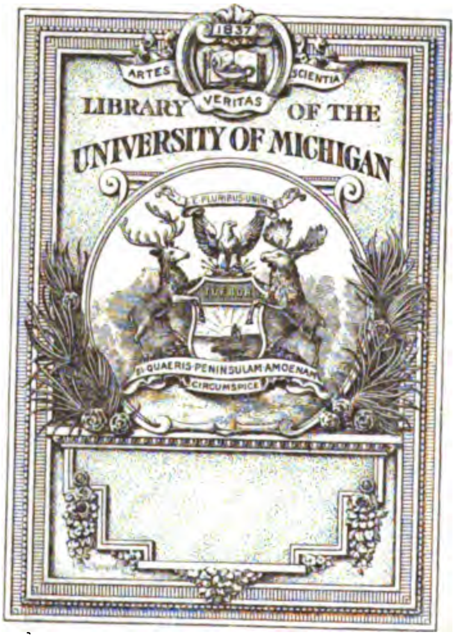

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DEVOTED TO THE

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ORIGINAL ARTICLES.

INFANT FEEDING—A REVIEW.

By A. JACOBI, M. D.,

Clinical Professor of Diseases of Children in Columbia College, New York.

IN the last decade great and successful strides have been made in medical therapeutics as well as in surgical. The former have been improved partly through the aid of pharmaceutical preparations and of the products of biological research, partly through new methods and appliances for hygienic and preventive purposes. It is mainly the infectious diseases which have been served by the former, and both public and individual hygiene by the latter. Early life has been particularly benefited, and by nothing more than by careful endeavors to improve the diet of the young, and thereby to remove the dangers of intestinal disorders and the sources of excessive mortality.

Sterilization.—Nothing has been more successful in that direction than the widespread practice of sterilization (and pasteurization) of cow's milk. Both are the logical development of the plan of treating milk by boiling, which I persistently advised these thirty-five years at least, and detailed in my "Infant Diet," in Gerhardt's Handbook, in Buck's Hygiene, in "Intestinal Diseases of Infancy and Childhood" * and in my clinical lectures delivered during the last third of a century.

Now what is it that boiling can and will do? Beside expelling air it destroys the germs of typhoid fever, Asiatic cholera, diphtheria and tuberculosis, also the oidium lactis which is the

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* P. 18. "After boiling, milk destined for the use of a baby during the day should be kept in clean bottles containing from three to six ounces, filled up to the cork, and the bottles then turned upside down in a cold place; such will keep longer than milk preserved in the usual way. Before being used it should be heated in a water bath; and by repeating this heating of the whole amount of the day's milk, several times during the twenty-four hours, fermentation will be retarded, and digestibility improved."

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cause of the change of milk sugar into lactic acid and of the rapid acidulation of milk with its bad effects on the secretion of the intestinal tract. Some varieties of proteus, and most of bacterium coli are also rendered innocuous by boiling. Thus it prevents many cases of infant diarrhœa and vomiting—not all of them. For the most dangerous of all the bacteria are not influenced either by plain boiling or the common methods of sterilization. Besides, "diarrhœa" is but a symptom of many causes, and "cholera infantum" is a name for a condition occasioned by many. Ebstein emphasizes the fact that babies at the breast are subject to cholera infantum, particularly in southern climates, also in public institutions. The influence of external temperature is a very important factor; its sudden changes produce intestinal disorders. Babies, taken from a hot railroad car to the deck of a lake steamer, from a warm bed to a draughty room, may develop a catarrhal enteritis which disposes to worse forms of disease. For the morbid condition of the epithelium caused by such sudden changes is a proximate cause of disease because it opens the way to all sorts of infecting substances. Poisons in the food of cows, indigestible baby foods—either indigestible *per se*, or through a morbid condition of the digestive organs—produce diarrhœa of many varieties. It need not even depend on ingested food; for according to W. Schild's recent investigations (Zeitsch. f. Hyg. u. Infect XIX.) germs of diseases may be found in the intestine of the newly born in from ten to seventeen hours after birth (min. 4, max. 20). The meconium of the newly born being free of germs, is supplied through the mouth with the bacterium coli and through the anus with the bacillus fluorescens, subtilis and proteus (even adults are infected through the same inlet). Linen, the bath, the air, the blood are sources of local invasion. In such cases, what is the sterilization of artificial food to accomplish? They are not reached by it.

Not even the natural food, breast-milk, is free of germs possibly attended with dangers. M. Cohn and H. Neumann found germs in the healthy breast-milk even after the mamma and nipples had been washed with alcohol and with solutions of corrosive sublimate. A. Palleske met with the staphylococcus pyogenes albus in one-half of all healthy women, F. Honigmann (Z. f. Hyg. u. Inf. XIV) in most of them, and H. Knochenstein (Inaug. Diss. 1893) in the mammæ of eight puerperal and nursing women. Evidently they had immigrated from outside; they proved innocuous. But who can doubt but that if the epithelium of the milk ducts had been morbid, there would have been a chance for a mastitis, or if the staphylococcic milk had got into contact with a sore stomach or intestine, there would have been an opportunity for gastritis or enteritis.

Nor is boiling, nor sterilization, a safe protection under all circumstances. Aerobic bacteria, the so-called hay or potato bacilli, with very resistent spores, which are found in cow dung and in the dust of stables, of the soil and streets, and of hay, peptonize casein and liquefy it and render the milk bitter. They are very poisonous; their pure culture gives young dogs a fatal diarrhœa. It takes hours of sterilization to kill them; in some instances it required five or six hours. Even the bacillus butyricus takes an hour and a half. But such a protracted sterilization, beside being far from certain in its effect, is at all events a clumsy procedure and one not calculated to benefit the milk. Thus hay feeding is an absolute necessity, for the bacilli are destroyed by a six weeks' drying. Besides, it is urged to keep the stables carefully clean, to avoid dirt and dust, to employ peat instead of straw for bedding, to wash the udder and tie the tails before milking, to waste the first milk, and to remove foreign material from the milk by centrifuging. But no absolute security can be guaranteed. That is why Flügge adds to his expositions a warning against some wholesale manufacturers who, always anxious about somebody's—their own—welfare are known to conceal by coloring the glass of their bottles the changed condition of the milk and the separation of butter particles.

Whatever I have here brought forward, is certainly not to disparage the boiling of the milk; it is meant to prove the danger of relying on a single preventive when the causes of intestinal disorders are so many. It is true, however, that the large majority of the latter depends on causes which may be met by sterilization; but not by sterilization only; also by pasteurization, that is, heating the milk to 70° C=165° F, and keeping it at that uniform temperature for thirty minutes—a procedure which destroys the same germs that are killed by a more elevated temperature, without much change in flavor and taste.

One of the questions connected with the employment of sterilized or pasteurized milk is this, whether the milk to be used for a child ought to be prepared at home, or whether the supply may be procured from an establishment where large quantities of milk believed to become immutable by sterilization for an indefinite period, are kept for sale. In regard to this problem Flügge plaintively expresses his regrets that "we have allowed ourselves to be guided by people who are neither hygienists nor physicians, but chemists, farmers, or apothecaries, and whose actions have been based on three false beliefs. Of these the first is that boiling for three-quarters of an hour destroys germs, the second that whatever bacteria remain undestroyed are innocuous, and the third, that proliferating bacteria can always be recognized by symptoms of decomposition." Nothing is more erroneous. Soxhlet himself, the German originator of sterilization, knew at an early time, that the fermenting process is now and then but partially interrupted by boiling, that butyric acid may be found in place of lactic acid, that a strong evolution of gas may be caused after such boiling, and that such milk may give rise to flatulency. Aye, milk which happens to contain the resistent spores of bacteria becomes a better breeding ground for them by the very elimination of lactic acid, and the longer such sterilized milk is preserved and offered for sale, the worse is its condition. It may be true that these conditions are not met with very frequently, but an occasional single death in a family caused by poisonous milk will be more than enough. Therefore, the daily home sterilization is by far preferable to the risky purchase from wholesale manufacturers who can not guarantee, because in the nature of things they cannot know, the condition of their wares.

Another alteration of a less dangerous character, but far from being desirable, is the separation of cream from sterilized milk which is preserved for sale. Renk, (Arch. f. Hyg. XVII) found it to take place to a slight extent during the very first weeks, but later to such a degree that 43.5 per cent. of all the cream contained in the milk was eliminated.

Sterilization has been claimed to be no unmixed boon because of its changing the chemical constitution of milk. Still, the opinions on that subject vary to a great extent, the occurrence of changes being both asserted and denied by apparently competent judges. But what I have said a hundred times, is still true and borne out by facts, viz: That no matter how beneficial boiling, or sterilization, or pasteurization may be, they cannot transform cow's milk into woman's milk, and that it is a mistake to believe that the former, by mere sterilization, is a full substitute for the latter. It is true, that when we cannot have woman's milk, we cannot do without cow's milk. There is no alleged substitute that can be had with equal facility or in sufficient quantity. But after all it is not woman's milk. Babies may not succumb from using it, and may but seldom appear to suffer from it, indeed they will mostly appear to thrive on it, but it is a makeshift after all and requires modifications. Hammarsten was the first to prove the chemical difference between the casein of cow's and woman's milk. Whatever was known on that subject at that time I collated in Gerhardt's Handb. d. Kind. 1st Vol. 1875, (2 ed. 1882). But lately Wrobleski demonstrated the difference in solubility of the two milks. Woman's casein retains, during pepsin digestion, its nuclein (proteid rich in phosphorus) in solution, it is fully digested; in cow's casein the nuclein is not fully digested, a "paranuclein" is deposited undissolved and undigested. Besides, woman's casein contains an additional albuminoid which is not identical with either the known casein or albumin. (H. Koplik in *N. Y. Med. Journal*, April 13th, 1895.)

Ergo: Cow's milk is not woman's milk. It is not identical with it. Sterilization does not change its character. It merely obviates such dangers as result from the presence of pathogenic germs, and from premature acidulation. The substitution of cow's milk, or of sterilized milk for woman's milk as the *exclusive infant food* is a mistake. Experience teaches that digestive disorders such as constipation or, diarrhœa, and constitutional derangements such as rhachitis are frequently produced by its persistent use, and it appears to be more than an occasional (at least cooperative) cause of scurvy.

Admixture of Cereals.—Since the advisability of finely dividing and suspending the casein of cow's milk and of adding to the nutritiousness of the latter caused me always to teach the admixture of cereals to it, even in the very first days of infancy, the subject of infant feeding has never been lost sight of by medical men, pure scientists and tradesmen. No subject has been treated more extensively, more eagerly, sometimes even more spitefully, than that of infant feeding. The philosopher's stone has not been so anxiously sought for, nor been so often found in medical journals, books and societies, as the correct infant food and the appropriate treatment of cow's milk. After the finally faultless thing had been discovered very many times, it was therefore not a surprise but a source of gratification to me to meet, in the *Berl. Klin. Woch.*, No. 10, 1895, an article of Heubner's who, after having contributed for years as much as any writer, if not more, to the literature of the subject, recommends the "utilization of flour in the intestines of young nurslings." Basing his remarks firstly on the researches of Schiffer, Korowin and Zweifel, (quoted in my early writings on that very topic more than twenty years ago) who by experimentally proving the digestibility of a certain amount of starch in the saliva (and pancreatic juice) of young infants* justified my empirical findings of many previous years, and secondly, on what he is pleased to call "Jacobi's practical experience,"—the Berlin physician recommends in intestinal diseases of the very young the simplest flours, mainly of rice and oats (which have a finer microscopical structure than wheat). He pointedly adds: "very young infants do better on a dilution of milk with a thin . .rice decoction than with mere milk sugar solution. Practical experience surpasses theoretical conclusions."† There is but one point in which the famous teacher does not yet agree with me, for in his expositions we meet with the remark, that he "cannot approve of the colossal dilution recommended by the authority of Jacobi." The "colossal dilution" alluded to is that of milk in 4 or 5 parts of oatmeal or barley water for the use of the newly born. In regard to this dilution also I trust I shall see my illustrious colleague siding with me yet. The demands of pepsin digestion, and of rapid growth and of the necessity of restitution of losses experienced by eliminations and excretions are just as many reasons for extra allowances of water in the diet of very young infants who have to rely on the services of others. Older children know how to find it and how to serve themselves. In addition, it is certainly true that a large amount of water passing through the kidneys removes the inconveniences and dangers of the peculiar physiological process which takes place in the first three weeks of every life, viz., uric acid infarctus, the results of which are gravel, renal calculus (by no means rare) and nephritis. Indeed, since the rather frequent adoption of my plan of supplying the very young with quantities of water, I hear less of renal complaints in them than I did dozens of years ago.

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*Bias dies hard. While it took Heubner more than twenty years to avail himself of very accessible physiological experience, a celebrity of equal rank (Philip Biedert, Handbuch der Kinderkrankheiten 11th ed. 1894. p. 39) still appears to approve of the opinion that a nursling must have "no amylacea" because of their indigestibility, before the protrusion of teeth. Before long, more than to-day it will be a generally accepted axiom that cereals must be given to make teeth when milk food alone does not suffice for their development.

†"Probiren geht über Studiren."

Perhaps the tide is beginning already to turn in my direction. Norbert Auerbach, whose researches on the difficulty of destroying the hay bacillus and the bacillus butyricus are very meritorious, recommends larger percentages of water in infant feeding than the customary ones. His mixtures for the first and second months of life are three parts of water and one of milk, for the third and fourth, two and one, for the fifth and sixth, one and one, for the seventh and eighth, one and two. His figures are, therefore, not exactly like mine, but even they may appear heretic to my critic. In connection with this subject I am also pleased to state that Auerbach agrees with me on another subject. The sugar he adds to the milk food of infants, is not milk sugar but cane sugar, of which he gives twenty grammes daily, and, also according to my old teaching, more during constipation. He prefers cane sugar undoubtedly for the reasons which guided me in my recommendations, though it is true that milk sugar is being stripped of its dangers in the same degree as boiling, sterilization, or pasteurization are carefully practiced.

Virtually, sterilization has been practiced by me these more than forty years, and has been taught by me these thirty-five years, both in lectures and in books and essays. My method has been referred to. I always urged that safety increased with the number of boilings. Still even lately New York gentlemen have been pleased to say, and one of them has printed though he was told of his mistake before printing, that Jacobi was an opponent of sterilization.

Actual sterilization according to Soxhlet was introduced in New York by A. Caille. Then, manufacturing firms took it up as a matter of course. One of them was prevailed upon by me to execute a device of Dr. A. Seibert, who advised the determination of the amount of sterilized food, and the graduation of the feeding bottles, according to the weight of the infant. In most cases this plan is good, for the condition of the child can mostly be measured by the increase of its weight. Only fat, clumsy, rhachitical children make an exception; in them the rapid increase of weight is rather a morbid condition than a symptom of healthy development. Besides, he improved his food by adding, in conformity with my practice and sterilizing at the same time with the milk, either barley or oatmeal water. A recommendation of his sterilizer is its cheapness, which makes it more accessible to the poor. His plan—developed later—to filter milk before sterilization, is identical with that recommended by Auerbach.

The writings and practical instruction of Dr. Rowland Godfrey Freeman have been a great advantage to New York, particularly to its poor population. He insists upon pasteurization as a sufficient method of safety. As the adviser of Mr. Nathan Strauss in his successful endeavors to supply thousands with a safe article of food, he has benefited the city and aided in setting an example which should and will be imitated.

Modified Milk.—Pasteurization is also employed by Rotch. In a paper read before the American Pediatric Society at Boston, May 4th, 1892,* he presented amongst others the following statements which I gladly repeat as I know his teachings to have done a great deal of good. Indeed I was so much impressed by them that I encouraged the gentleman who had conducted a milk laboratory on Dr. Rotch's plan in Boston to establish a similar institution in New York. Some of Dr. Rotch's lucid statements are as follows:

"What the profession needs is the knowledge that they may have milk laboratories where the materials are clean, sterile, and exact in their percentages. Slight changes in the three elements of the milk, of which we have the most accurate knowledge, namely, the fat, sugar and albuminoids, are of real practical value in managing the digestion and nutrition of the infant. (normal percentage in milk of fat 2.02-4.37, of milk sugar, 5.70-7.10, of albuminoids 1.08-3.07, of mineral matter 0.12-0.20.) The digestive capabilities of the infants differ, just as those of adults, and nature, therefore, provides a variety of good breast-milks adapted to the individual idiosyncrasy of the special infant. With this fact impressed upon us, we can well see that in artificial feeding no routine mixture will, in all cases, prove successful.† We are in need of a means by which we can prescribe exactly according to the idiosyncrasy of the digestion we are dealing with."

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*The value of milk laboratories for the advancement of our knowledge of artificial feeding. By T. M. Rotch, Trans. Am. Ped. Soc., 1892, iv. 244.

†All this proves also that nature allows a great deal of latitude, for the milk of a woman is changing and sometimes quite rapidly so, and still the baby continues

"A separator with many thousands of revolutions in a minute, separates from the milk foreign material and divides it up into a cream of a stable percentage and separated milk. The milk sugar and the albuminoids, also the mineral matter of this milk is fairly well-known, and thus the laboratory worker is enabled to put up any prescription, which for a healthy baby of four months would read fat 4, milk sugar 7, albuminoids 1.50. Put up 8 tubes, each 4 ounces, (with lime water 5 per cent.) Pasteurize (75°C-167°F) for twenty minutes. In this mixture the lime water is just sufficient to slightly alkalinize the cow's milk.* In this way the food of the child can be modified according to age, and to changed conditions of health."

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to thrive. It also proves that an attempt at regulating the percentages of milk according to invariable rules, while circumstances of surroundings and individual health—perceptibly changed or not—may differ, is liable to be very deceptive. Altogether, no iron clad rule holds good for a living body, in which organic assimilation is not regulated by the fixed laws of crystallization. This is, indeed, proved by nothing better than by the variability of the constituents of good milk. According to the very figures presented by Dr. Rotch himself fat may vary from 2.02 to 4.37, albuminoids from 1.08 to 3.27, and still the milks exhibiting these wide differences are " normal."

In regard to the percentages of fat in cow's and in woman's milk the results of chemical analysis have lately changed in favor of the latter. But the general principles in regard to fat feeding, its effect on digestion, and the normal occurence of fat in the healthy fæces of an infant fed on normal nourishment (breast-milk) are not therefore altered.

Neither mathematics nor chemistry alone direct the organic economy. If that were so, the chemist Soxhlet—otherwise so deserving and justly famous—would be justified in the advice he cooly gives the physician, to add milk sugar when there is no fat in the food and thereby to obtain the necessary amount of carbon-hydrates. Fortunately organic chemistry is not identical with physiology.

The methods of Biedert and Arthur Meigs are based upon these modern analyses of milk. The former prepares a cream mixture which contains 1 per cent of casein, 2 of fat and 4 of sugar. It is to be mixed with milk in different proportions. One of the reasons urged by him for the addition of cream is the greater dilution (accomplished by my cereal decoctions) of the cow casein, the difficult digestion of which he takes for granted. The mixture of Dr. Meigs is well thought of by many physicians. But it is too easily influenced by irregularities and by accidents happening to the cream while being obtained, and to the milk sugar solution, to be proof against frequent failures and to become popular among the masses. (Jacobi, Intestinal Diseases, p. 32.)

*Cow's milk is either alkaline, or neutral, or acid. The constant recommendations of five per cent. of lime water for the purpose of alkalization is therefore far from exact, and from strictly scientific. Besides, how much alkalization is effected by one and a half drachms of lime water ? They contain exactly or are presumed to contain, one-eighth of a grain of lime.

Lime water, the liquor calcis, is a saturated aqueous solution of calcium hydrate whose percentage varies with its temperature. At 59° F it contains somewhat over 0.17 per cent (1 : 600), in rising temperature less, at the boiling point 1 part of lime in 1300 of water. It redissolves as the liquid cools. If the food containing lime water be given at a temperature of eighty or ninety degrees, part of the lime is thrown out. Lime water warmed loses most of its alkaline reaction ; it is markedly alkaline when cold, only faintly so when boiled. An experiment made with good milk from the household supply gave the following results ; reaction acid, also on boiling. One-twentieth part of lime water added to it changed the reaction but slightly, it remained acid. The mixture being boiled, reaction remained the same. When again cooled and shaken up, it was still acid, but slightly less so than before the dilution of the milk with lime water.

In a case of duodenal jaundice, in a girl of six years, the doctor prescribed fat 0.5, milk sugar 6, albuminoids 4, give 4 ounces every 2 hours. Send 12 tubes, each 4 ounces, lime water one tenth. In a case of summer diarrhœa in a girl of four months fat 2, milk sugar 5, albuminoids 1, send 20 tubes, each 1 ounce and 1 drachm. At time of each feeding, add lime water 3 drachms. Sterilize at 212°F.

One of the beliefs guiding the author of this method is as follows: "The constituents of the nutriment which nature has provided for the offspring of all animals and human beings that suckle their young, is essentially animal and not vegetable. Human beings in the first 12 months of life are carnivora. An animal food entirely and always free from any vegetable constituents, has been proved to be the nutriment on which the greatest number of human beings live and the least number die."

Those who followed my teachings at any time during this one-third of a century, know that I take some exception to this broad statement. Saliva and pancreatic juice are good for something better than idle elimination, and "nature" prepared the animal young from the first moment for more than mere pepsin digestion. The proof Dr. Rotch refers to can be experience only. Mine has taught me somewhat differently from the axiomatic positiveness of his assertion. But it must be far from me not to present Dr. Rotch's case in full. His standing and merits are such as to give him a hearing wherever and whatever he discusses. His rules, which moreover may be modified by my method at any time, are thoroughly good, they are scientific, exact and well thought out. Moreover, they are proven to be practicable. No matter whether it is the careful handling of a cautiously prepared milk, the methodical composition according to percentages, or the faithful pasteurization, or all of them, the results are good. I know of a number of babies who in health and disease have done well on the protracted use of the laboratory milk. Only one observation struck me in a few cases. The formation of the muscles and particularly of the bones appeared to be slow, the teeth came a number of weeks or even months too late, the cranial bones turned slightly soft in a few instances. In a few such cases I had to add animal broths or juice before the usual time; in one I tried phosphorus (elixir phosphori) which was rejected; in others it was well borne and useful. But taken all in all, the method appears to be sound and successful, as far as it can be so with cow's milk and the casein of cow's milk. It is to be deplored that for the present, it is a method only for the rich; mine has the advantage of being one for the people, both rich and poor. If, or as long as, the circulars of the laboratory will keep free of pretentious exaggerations—they have been taking that turn lately—

the profession will do well to rely on it, or its like, as one of the means of furnishing the baby a food deprived of dangers, and in most cases sufficient. When found insufficient as regards tissue building, cereals can always be furnished in the same mixture. The empirical knowledge of their beneficial effects, with which we have been furnished for more than a generation, has lately again been tested experimentally by Springer, of Paris, who improved the development of bone by a decoction of mixed cereals boiled for hours in succession. This long duration of the boiling process is, however, not demanded.

Like Professor Rotch, Professor G. Gaertner,* of Gratz, employs the centrifuge† for the purpose of obtaining a milk resembling that of woman. The latter was found by Escherich to contain casein 1.82, fat 3.10, sugar 6.23 per cent. The average of many examinations of cow's milk resulted in casein 1.76, and fat 1.81, and sugar 2.4 per cent. That of "fat milk" contained casein 1.76, fat 3, and sugar 2.4 per cent. This "fat milk" is obtained by so arranging the tube which expels the cream from the centrifuge separator that just one-half of the milk contained therein is expelled and collected. In this way, as casein, sugar and minerals are not affected at all by the process of centrifuging, the percentage of the latter is not changed at all, while that of the fat is doubled. The difference between Gaertner's and Rotch's methods is this that the former is applicable to the large majority (but that only) of infants who require cow's milk appropriately prepared; and that the latter permits of all sorts of changes and percentages, and of all adaptations to the requirements of both the well and the sick, according to the opinions and intentions of the physician in every individual case.

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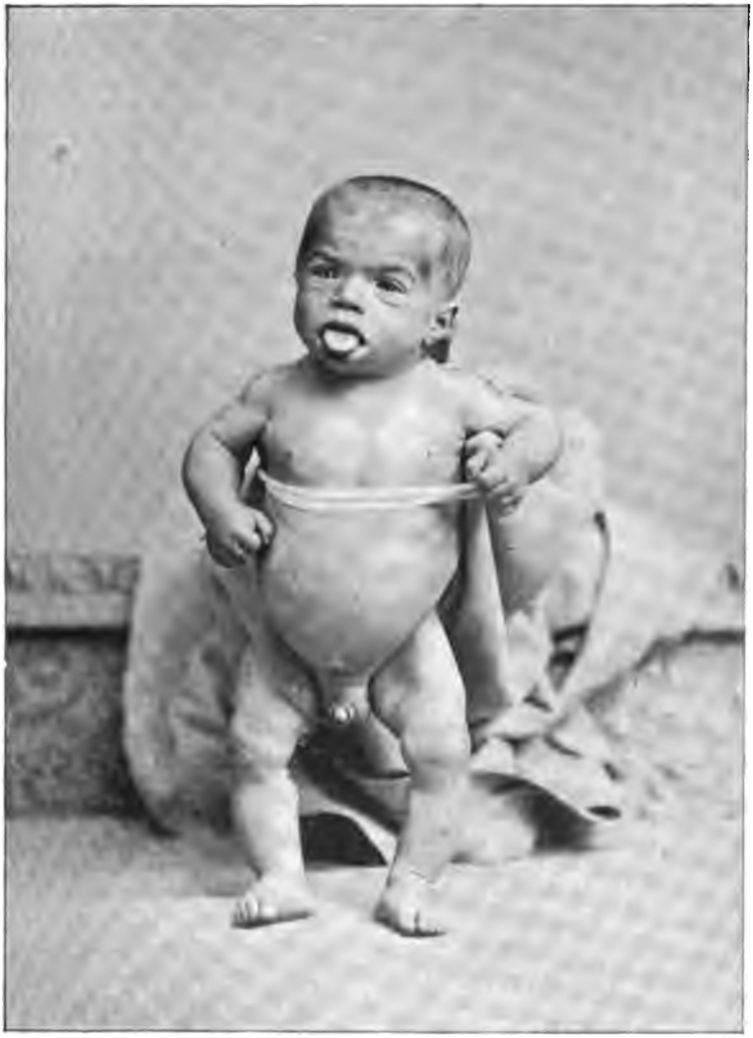
* Uber die Herstellung der Fettmilch.
Prof. Escherich, Die Gaertnersche Fettmilch, eine neue Methode der Säuglingsernahrung. Both in Wiener Med. Woch. 1894.

†Recommended for the preparation of children's milk in my "Intestinal Diseases." 1887. p 23.

Green Urine due to Indigo. Dr. Archibald Garrod showed before the Clinical Society of London, a specimen of urine from a child who had sucked a piece of carpet colored with indigo. The green coloration was due to the combination of the yellow tint of the urine with the blue of indigo. On passing the urine through filtering paper it lost much of its green tint, whilst the paper was stained blue. The indigo was, therefore, in suspension. Some years ago, a favorite treatment for epilepsy was indigo to the extent of 6 drachms a day. Those patients had green alkaline urine. *Brit. Med. Jour.*, 1895, j, 365.



A CRETIN.

Age, 4 years; height, 25 inches; weight 16½ lbs.

DR. J. HENRY FRUITNIGHT AND DR. DILLON BROWN.

(Children's Hospital of St. John's Guild.)

A CASE OF ENTEROCYSTOMA IN A CONGENITAL SUBGLUTEAL HERNIA.

By HOWARD LILIENTHAL, M.D.,

Lecturer on Surgery, New York Polyclinic; Assistant Attending Surgeon to Mount Sinai Hospital.

THIS rare and curious case came under my observation March 5th, 1895, when the patient was admitted to Mt. Sinai Hospital.

Rosa G., was a six year old child of Russian Jewish parentage. She was fairly well-developed physically but seemed rather deficient mentally. There was marked nystagmus. The defect for which her parents sought a remedy was a remarkable enlargement of the right buttock which, though congenital, was increasing in size. The shape of the mass is well indicated in the drawing, for which I must thank my friend, Mr. V. W. Newman. It looked as if the girl had originally three legs of equal size, one of which had been amputated at the upper third of the thigh. The tumor formed a truncated cone, the circular disc of skin making the truncated apex, being *non cicatricial* and two and a half inches in diameter. It was encircled by a firm fibrous ring. Two inches below the disc the circumference of the mass was twelve and a half inches. Measurement from right anterior superior iliac spine across the disc to the intergluteal fold was twelve and a quarter inches. Similar measurement of the left (normal) side was seven and a quarter inches. The entire mass could be wagged in a comical way by the action of the gluteus maximus which played over the greater part of the growth. For the most part the tumor felt like a mass of muscle, but under the disc could be felt a firm fluctuating body as big as a large egg, lying apparently free in a cavity. There was a distinct immediate impulse over the whole mass, best felt near the disc when the girl strained or cried. Three openings which came spontaneously, discharged a small amount of pale serous fluid, but ended blindly about a quarter of an inch below the surface.

Various diagnoses such as hernia, dermoid cyst, spina bifida and enterocyst were suggested by different physicians who saw the patient. Aspiration was done with a fine needle. In one direction a honey-like fluid containing cholesterin was withdrawn, while from the cyst beneath the disc a brown putty-like substance composed microscopically of granular material with long Charcot-Leyden crystals was obtained. From the mixed character of the tumor contents I thought that it was probably a dermoid cyst.

On March 8th, the girl was chloroformed for operation. Examination by rectum threw no further light on the case but revealed a small tense fluctuating body about as big as a filbert

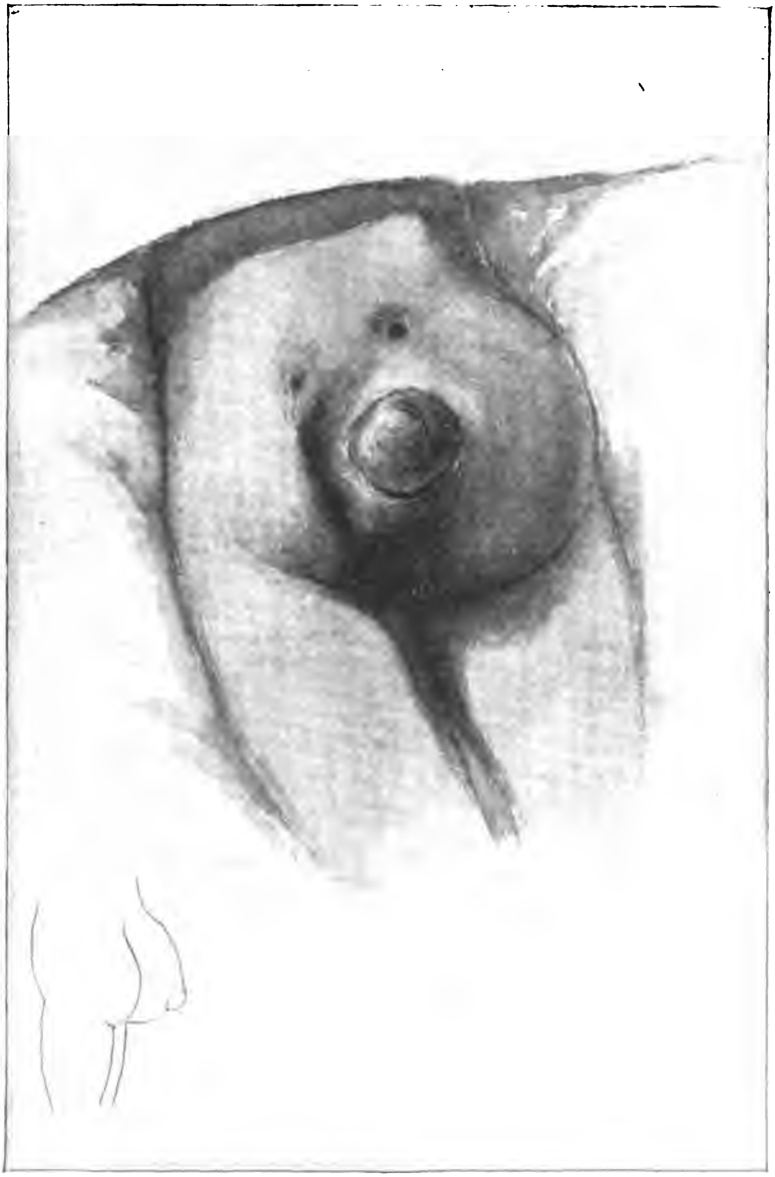


Fig. 1. Dr. Lilienthal's Case of Enterocystoma in a Congenital Subgluteal Hernia.

on the anterior surface of the sacrum. An incision about six inches long was now made from the sacro coccygeal joint diagonally across the tumor in the direction of the great trochanter. A little wen-like dermoid was opened just beneath the skin in the course of this cut. It was very small and was excised. The incision ran just above the disc. Another cut below the disc was made and this curious piece of skin removed entire for examination. Just beneath the disc was the cyst which could be felt free within the tumor. I carefully cut down upon the sac which contained it. This sac being opened a little serous fluid escaped and I seemed to have entered the peritoneal cavity. Within this cavity lay the cyst itself which was apparently a piece of large intestine. There was the longitudinal striation, epiploical appendages and a thoroughly developed mesentery which was attached to the anterior part of spine or sacrum, I could not tell which. Before venturing to cut off this piece of intestine I incised it and found it filled with the putty-like substance before described. The lumen of the gut gradually decreased in diameter like a funnel till it became entirely occluded. The whole gut-cyst was as big as a duck's egg. It was lined with red, normal-looking mucous membrane. The opening through which the pedicle and mesentery came led directly into the abdominal cavity. This was proven by the insertion of my index finger, the opening being large enough to admit the entire digit. The whole cyst and as much as possible of the pedicle was drawn down, ligated in sections and cut off. A second cyst as large as a small hen's egg was now found in the buttock to the outer side of the first one. It also had a mesentery and pedicle running in the same direction as the other. The cyst walls were, however, thin and not typically intestinal. This tumor, too, was also tied and cut off, the pedicle retracting into the abdominal cavity. It contained honey-like fluid filled with crystals probably of cholesterin.

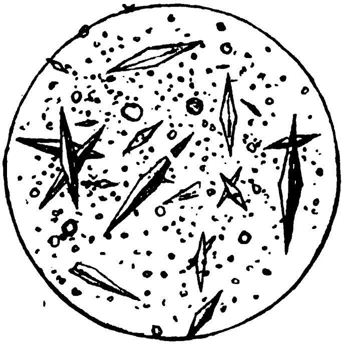


Fig. 2. Charcot-Leyden Crystals.

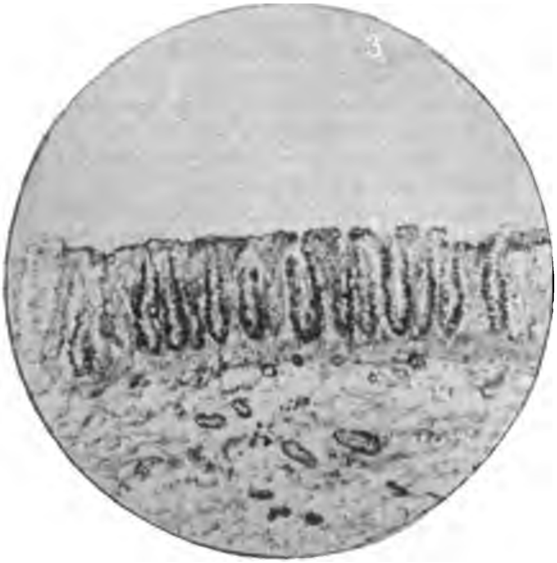
I now wished to attack the little anterior sacral cyst but fearing injury to the rectum I first removed the coccyx. An aspirator needle was then carefully guided down to it and honey-like fluid was withdrawn but the cyst became so collapsed that I could not find it again.

The operation had lasted over two hours and the patient was beginning to show the effects of the long anæsthesia so I closed the wound by suture with gauze drainage. A firm dressing was applied and the child put to bed. There was considerable collapse during the following twenty-four hours rendering very active stimulation and saline infusion necessary. The close neighborhood of the anus and the unruliness of the child infected the wound and there was suppuration, but uneventful healing by granulation followed. There is still very distinct impulse when the girl cries or strains and the right buttock is considerably larger than the left. A future operation to try to remedy this hernia may be needed but the child is now comfortable,—standing, sitting or running about. Examination of the specimens by Dr. Mandlebaum, pathologist to the hospital, showed typical large intestine structure in the larger cyst. The three layers and the usual mucous membrane with intestinal glands were present. As the calibre of the cyst became smaller, toward the pedicle, the same structure persisted until even in the pedicle itself, while no central cavity remained, the elements in rudimentary form were present.

The smaller cyst was thin walled and not typically intestinal though here and there the lining membrane was thrown into folds as if in an abortive attempt at gland formation. The curious disc like piece of skin as before stated was normal and not cicatricial. It was suggested that it might have been a rudimentary attempt at the formation of an anal aperture for the underlying piece of gut.

In looking over the literature pertaining to cases of this kind I was able to find but few records. From the perusal of an excellent monograph by Dr. R. H. Fitz, of Boston, on persistent omphalo-mesenteric remains, (*Am. Journ. Med. Sc.*, 1884, lxxxviii, 30.) I must conclude that the majority of the enterocysts, especially those with a mesentery and most cases of double intestine, are due to the faulty embryonic development of the omphalo-mesenteric tissues (vitelline duct). This duct may run to a point high or low in the gut. Meckel (*Tabulæ Anatomico-pathologicæ*, 1822, Fasc. iii, 5.) refers to an observation by Blasius of a duplication of the œsophagus from first to 6th rib.

The commonest of these persistent remains is the diverticulum known as Meckel's. Roth (*Virchow Archiv*, 1881, lxxxvi, 317,) mentions the fact that by constriction of the neck of this diverticulum, retention cysts may be formed. These cysts may be entirely closed or may still be in continuation with the general



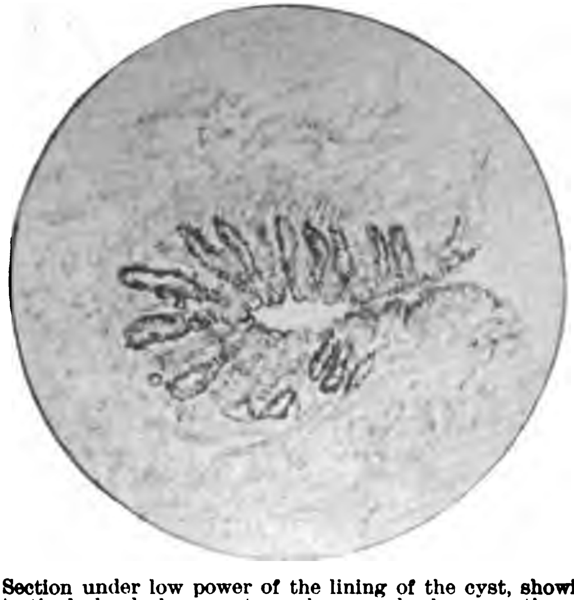


Fig. 3. Section under low power of the lining of the cyst, showing the intestinal glands, basement membrane and submucous tissue.

Fig. 4. Section showing more elaborately developed gland from another portion of the cyst lining.

intestinal cavity. One case is mentioned where the pedicle of such a cyst became twisted with consequent necrosis and peritonitis. These intestinal cysts may even be so large as to interfere with childbirth. Hennig (*Centralbl. f. Gynækologie*, 1880, iv, 398) reports one in the mesentery of a new-born child eight and one half by five and one half by four inches. It contained a pale slimy fluid. The cyst walls were covered by epithelium and contained intestinal glands. A cyst lined with mucous membrane between the coccyx and rectum of a twenty years old girl born without uterus and adnexa is mentioned by Bircher (*Cor. bl. f. Schweiz. Aertzte, Basel*, 1879, ix, 517). The cyst had opened and might easily have been mistaken for a fistula in ano. It was seven centimeters deep and was dissected out with difficulty. An almost similar case in a man, otherwise well-formed, was shown by me March 13th, 1893 (*N. Y. Med. Rec.*, 1893, 472.) at a meeting of the surgical section of the N. Y., Academy of Medicine. The man refused to have the cyst wall dissected out, however, being satisfied to keep the mucous discharge under control by astringent injections into the cavity. This cyst had suppurated and when I opened it I could insert the entire length of my forefinger and palpate from the anal end of the rectum far up the anterior sacral surface, feeling the abdominal contents separated from my finger apparently by

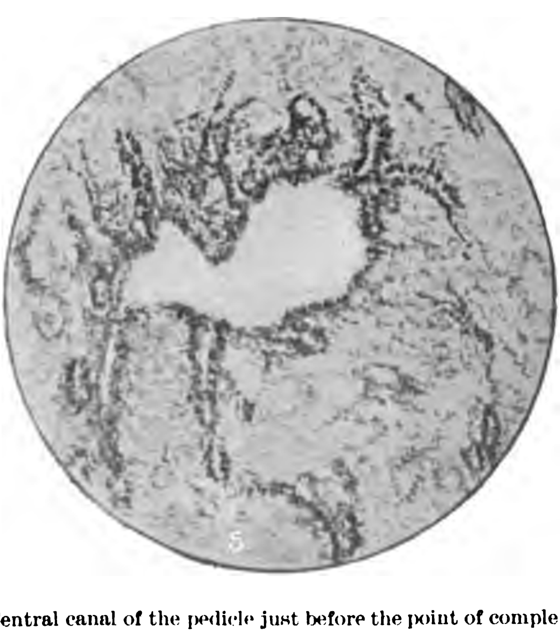


Fig. 5. Central canal of the pedicle just before the point of complete occlusion.

thin mucous membrane. I am of course unable to say whether or not this cyst had a mesentery.

The final case to be cited, and also the most recent one next to that forming the subject of this paper, has been reported by Studsgaard (*Hospitals Tidende*, 1894, p. 641.) The patient was a 14 year old girl whose abdomen had always been large. A cyst was discovered and was punctured when the child was 4 years old and again when she was eleven. A quart of yellow fluid was withdrawn in October, 1893 and on November 3rd the same year abdominal section was made. The tumor was found to be in the right side. It was a pear shaped cyst in the mesentery, the narrow funnel-like stem going toward the back bone. It was cut off as high as possible. From its histological structure, Studsgaard considered it to be a diverticulum from small intestine, the pedicle of which had become obliterated. The tumor contained 2000 cubic centimeters of fluid. It is mentioned as a unique case.

Probably other instances of these cyst formations are to be found in medical literature but I am sure they are extremely rare and nowhere have I been able to find a parallel case to the one herein described where the enterocyst formed the principal portion of the contents of a most unusual form of hernia.

The Cutaneous Irritation of Measles, etc. Balsam of Peru is a useful addition to many ointments, both on account of its pleasant odour and because it is in itself a valuable non-irritating antiseptic. When added to vaseline it is much more readily mixed if a few drops of alcohol or castor oil are added. The following may be recommended to allay the cutaneous irritation of measles, chicken-pox, etc.:—

℞ Lanolini puris ℥j
Vaselini ʒiij.
Olei Ricini ♏iij.
Aquæ Destill. ʒv.

Ft. ung.—S. Apply as required.

Preparations of vaseline or paroleine can have a pleasant odour given to them by the addition of a few drops of oil of wintergreen. *Practitioner*, 1895, liv. 190.

Psoriasis in Infants. Rille at the Imperial Medical Society of Vienna presented a 38 day old child affected with psoriasis. The disease had appeared some days after birth and had covered the greater part of the body. It was noted that Kaposi had seen the disease in a child 8 months old, Neumann, a case in a child 4 months, and Hebra had observed two children less than a year old so affected.

THE JAPANESE ICE BAG.

By A. M. PHELPS, M.D.

New York.

I HAVE recently had occasion to examine and use the Japanese Paper Ice Bag, and find that it fills all the requirements of the rubber bag in the treatment of joint diseases and acute rheumatism. The rubber ice bag is an expensive, cumbersome and heavy affair. The Japanese Ice Bag is inexpensive, and quite durable and can be folded up and packed in a physician's valise, ready for use at any time.

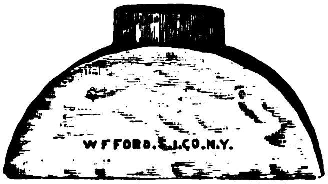

W F FORD.S.I.CO.N.Y.

Fig. 1 represents the Ice Bag folded; when in this shape it takes up less room than a thick piece of paper.

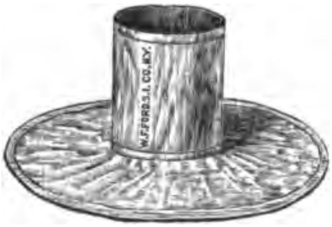

W.F.FORD.S.I.CO.N.Y.

Fig. 2 represents the Ice Bag extended, ready to be filled with ice. A string is tied around the mouth. It is softer, lighter and more agreeable to the skin than rubber.

Mr. Ford has imported a number of them and I am quite sure that it will take the place of the rubber ice bag.

Dr. Canini, of Leghorn, a well known Italian specialist in diseases of children, who died recently, has bequeathed his entire estate, amounting to 2,300,000 lire (£92,000) for the foundation of a hospital in which poor children suffering from diphtheria may have the advantages of the serum treatment gratuitously. *Brit. Med. Jour.*, 1895, i, 660.

A CASE OF FIBROID PHTHISIS (TUBERCULAR) WITH EXTENSIVE SCARRING OF THE SKIN (SYPHILITIC.)

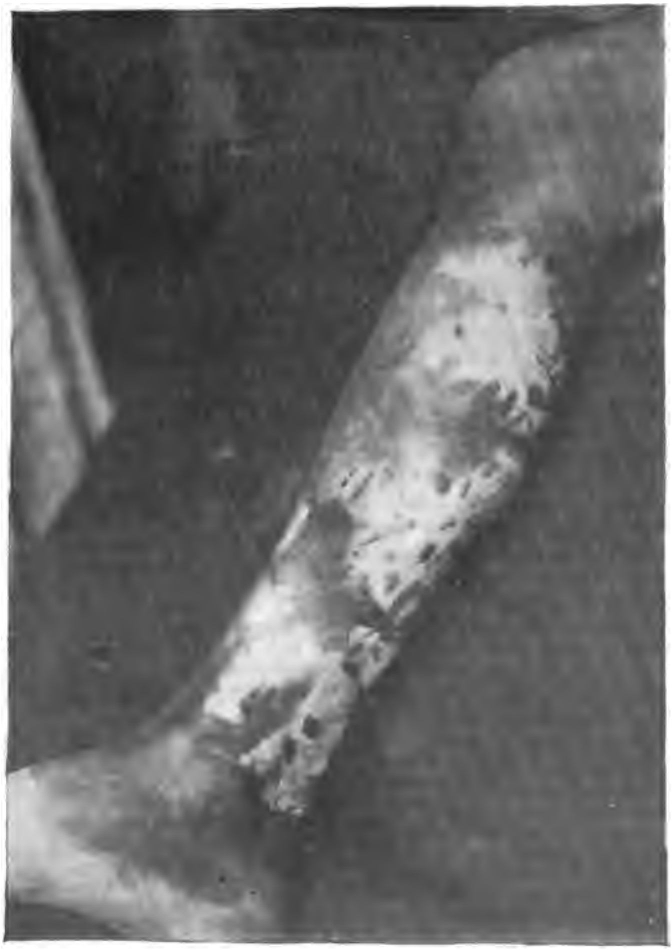
By G. A. SUTHERLAND, M.D.

Physician to the North London Consumption Hospital, and to Out-patients, Paddington Green Children's Hospital.

THIS patient, a girl, was seen by me for the first time on September 29th, 1893, when she was eight years old. For some years she had suffered from cough, which was worse in the morning but was unaccompanied by expectoration. There was no history of any definite illness until the year 1890, when an outbreak of sores on the legs, thighs, and buttocks occurred, for which she was treated as an out-patient at the hospital. On looking up the records, the only facts which I have been able to gather regarding this illness are that there was extensive ulceration on both lower extremities, that healing was slow, but that recovery finally took place under mercurial treatment,—namely,grey powder internally and the application of black wash locally. Salivation occurred during the course of the treatment. In the early part of 1893, she suffered from enlargement and suppuration in the glands of the neck, which were operated on. During the summer of that year she had an attack of scarlet fever, and when discharged from the hospital she was advised to have medical treatment for her chest which was weak. This was the first intimation her friends had regarding any pulmonary affection, and they had not previously observed any symptoms of disease apart from the cough already referred to.

The patient's mother died of pulmonary phthisis. Her father is not very strong but has no constitutional disease. There have been thirteen children in the family, five of whom were born alive, and the others were all premature and dead born. Of the five, three died in infancy from causes not known.

On admission to hospital the patient was fairly well nourished but looked ill. On the right side of the neck there were some scars of a tubercular type marking the site of old abscesses. There were a few rounded cicatrices, small and superficial, on the chest below the right clavicle, which were said to be the result of a scald in infancy. The most marked and the most extensive scarring was on the thighs and legs, from the trochanters to the heels, and the right leg presented far more cicatricial than normal tissue. The scars varied much in size, and some were from three to four inches long, white, slightly depressed, round serpigenous or irregular at the edges, and intersected in parts by strands or islets of healthy skin tissue. Some of those on the thighs had an elevated and puckered appearance. The anterior and external surfaces of the limbs were the parts chiefly affected. On a more



Dr. George Sutherland's case of extensive scarring of the leg. The healthy skin has been stained with iodine solution and the white patches represent the scars.

From a photograph taken by Dr. J. McGregor.)

minute examination of the apparently healthy intervening tissue, it was found to be dotted over with numerous white points, giving an appearance to the limbs of having been subjected to a shower of drops of molten metal. These minute scars were most abundant on the legs, but were present also on the thighs to some extent.

Examination of the chest showed deformity on the left side. There was slight retraction of the axillary and infra-clavicular regions, and on deep respiration the right side moved considerably more than the left. The left shoulder was rather depressed, and a curvature of the spine was present in the dorsal region, with the convexity towards the left side. There was dulness on percussion over the left lung, very marked in the axilla and over the lower lobe posteriorly, and the pulmonary area was diminished in extent. Stomach resonance was elicited as high as the fifth rib anteriorly and the tenth rib posteriorly, while the right lung extended half an inch to the left of the sternum. All over the left side the breathing was blowing in character, being bronchial at the apex, amphoric over the lower half of the scapula and distant bronchial toward the base. Coarse bubbling rales were heard on auscultation over the middle of the back on the left side, and numerous crepitations and friction sounds were audible over this lung. Pectoriloqy was well marked at the inferior angle of the left scapula. The right lung was apparently healthy, although the abnormal physical signs in the left lung were conducted for a considerable distance across the spine.

The heart was markedly displaced. The apex beat was felt in the fifth intercostal space in the mid-axillary line on the left side, and the normal area of cardiac dulness was encroached on by the right lung. The heart sounds were booming in character but no murmur was detected. The pulse was regular and of good volume, and averaged about ninety beats per minute. Distinct clubbing of the fingers was present. The other organs presented no sign of disease.

During a stay of six weeks in hospital, the patient improved considerably. A slight amount of dyspnoea, which was present on admission, passed off and did not recur except on exertion. The temperature was normal throughout. She coughed usually on waking in the morning, but there was little expectoration and only one specimen was obtained, which was found to contain tubercle bacilli. Slight improvement took place as regards the expansion of the left side of the chest, and the drooping of the shoulder and spinal curvature became less marked. The treatment consisted of nourishing diet, the administration of cod-liver oil, malt, and iron, and the employment of chest expanding exercises. This patient has been under my care at intervals during the past year but there are no further changes of special interest in her condition.

I relate this case because of the apparent coexistence of two diseases, tuberculosis and syphilis, in the same patient, but prefer to give the clinical data and a representation of the skin lesions for the consideration of others, rather than to dogmatise on their interpretation. The existence of tubercular disease may, I think, be taken as satisfactorily proved, and the form it has assumed in the lung is that of "fibroid phthisis," in which the process of fibrosis seems to have checked, at least for a time being, the destructive activity of the tubercle bacilli. The characteristic changes in fibroid disease of the lung are well illustrated in this case. As regards the presence of syphilis, I am led to infer this from the extensive scarring of the lower extremities, which appears to me to resemble that caused by syphilitic ulceration more than anything else. The history of numerous miscarriages preceding the patient's birth, the somewhat specific appearance of the patient's face, and the fact that the ulceration in the extremities was diagnosed by others as syphilitic, represent the only other evidences in favor of syphilis which I have been able to discover.

PRACTICAL NOTES.

The König-Maas Method of Restoring Persons Apparently Dead from Chloroform. The operator standing on the left side of the patient and facing him, places the ball of the thumb of the opened right hand upon the patient's chest, at a point between the apex beat and the sternum. He then repeatedly presses in the thoracic wall with a quick, strong movement, at the rate of thirty to one hundred and twenty times to the minute.

There can be no doubt that the efficacy of the Konig-Maas method lies in its direct action on the heart, restoring not the respiration only, but the circulation also. If on a fresh cadaver the precordium be quickly and forcibly compressed, it is easy to detect a distinct pulse wave in the carotid arteries; and the pupils will be found to contract as the blood fills the capillaries of the iris.—LEEDHAM-GREEN, *Birmingham Med. Rev.*, 1895, xxxvii, 84.

Method of Preparing Bone Marrow for the Treatment of Pernicious Anemia. Three ounces of fresh *bone marrow* (as much red as possible) are made up into a paste with *port wine*, one ounce; *glycerine*,one ounce; *gelatine*, five drachms. A little care is required in making the paste, to keep the gelatine and the marrow sufficiently fluid for them to be thoroughly mixed. The gelatine should be soaked in sufficient water to soften it, and then should be melted with the glycerine, the mixture being kept in a mortar previously made hot with boiling water, while in another mortar, made hot in a similar manner, the marrow and wine are mixed. Then the contents of the two mortars should be thoroughly incorporated and allowed to set. The hospital butcher seems to have no difficulty in supplying the marrow free from bone spicules.—ALFRED G. BARRS, *Brit. Med. Jour., London,* 1895, i, 358.

The Treatment of the Nose and Throat during the Course of Measles and Scarlet Fever. The objects to be accomplished are to thoroughly cleanse the mucous membrane, to render the secretions alkaline, to render inert the bacteria which may be present, and finally to lubricate the mucous membrane and protect it from too rapid evaporation. In cleansing the nares, use a simple one-bulb *atomizer* which is course and free, in order not to blow a lot of air into the nostrils, or it may be poured from a *teaspoon*, a *dropper*, or a Dessar's *nasal douche cup*. Cleansing solution: *Seiler's antiseptic tablet,* one tablet; *cocaine,* four grains; and *water,* two ounces. Oily protective: liquid *albolene* or *hydrastol,* a preparation of hydrastis with oil of cinnamon and other aromatics, one ounce; *menthol, thymol* or *eucalyptol,* one grain; and *spirits of chloroform,* one-half drachm. One-half per cent. *cocaine* may be added by first dissolving it in *oleic acid* (one grain of alkaloid to the minim of the acid.) For acute zymotic coryza of children: *eucalyptol,* six minims; *cocaine,* five grains; *oleic acid,* five minims; *chloroform,* one drachm; and *hydrastol,* two ounces; or *thymol,* two grains; *terebene,* five grains; and *hydrastol,* one ounce. For catarrhal laryngitis: *chloroform,* one-half drachm; *menthol,* five grains; *camphor,* ten grains; and *hydrastol,* enough to make one ounce:—spray down into the larynx several times daily. If a powder is desired as a protective, use the compound *stearate of zinc* combined with *boric acid,* ten per cent. *menthol,* two per cent., *cocaine,* four per cent. etc. If there is a croupous exudate, use *peroxide of hydrogen,* preceded by a spray of one per cent. solution of *cocaine,* and followed with an oily protective. For epistaxis, the application of *peroxide of hydrogen* is excellent. The inhalation of warm, medicated steam is valuable, and one-half to one drachm of any of the following mixtures may be added every two or three hours to the boiling water: *tar,* one ounce; and *alcohol,* four drachms. Or; *carbolic acid* and *cresoline,* of each two drachms; and *eucalyptol and balsam Peru,* of each four drachms; Or: *gum camphor,* one drachm; *menthol,* two drachms; *oil pine needles,* two drachms; *eucalyptol,* two drachms; and *oil of tar,* enough to make two ounces. Or: *eucalyptol* and *thymol,* of each one drachm; *carbolic acid* and *benzoic acid,* of each thirty grains; and *terebene,* enough to make two ounces.—C. C. RICE, *Am. Med. Surg. Bull.,* 1895, viii, 325.

Sodium Fluoride in Infantile Tuberculosis. Dr. Bourgois, (*Bull. de l'Acd. roy. de Med de Belg.* Vol. xi) concludes that: 1. Purified sodium fluoride has a marked action upon children whether they have only a tuberculous diathesis or are already tuberculous, and the good results are enduring; 2, the dose is from $\frac{1}{10}$ milligramme to 5 milligrammes ($\frac{1}{650}$grn. to $\frac{1}{13}$ grn.) a day; 3, when the specific effects of the remedy manifest themselves the dose is to be lowered; 4, children take the drug very well, and hardly ever show any intolerance.—*Am. Med. Surg. Bull.* 1895, viii, 553.

Pilocarpine for Acute Nephritis in Children. G. W. Lueck recommends *absolute rest* in bed; the administration of *pilocarpine* ($\frac{1}{20}$ to $\frac{1}{30}$ grain every three or four hours;) the free drinking of *cream of tartar lemonade*; *poultices* over the region of the kidneys; and supporting the action of the heart by proper remedies. *Therapeutic Gaz.*, 1895, xviii, 733.

To Disguise the Taste of Cod Liver Oil. Four hundred grammes of *oil* are mixed with 20 of freshly roasted and ground *coffee* and 10 of *animal charcoal.* The whole is kept in a water bath at 140 degrees F. for fifteen minutes in a stoppered flask. It is shaken occasionally for two or three days and then filtered through paper. The oil is limpid and light colored, and tastes and smells strongly of coffee.—*Times and Reg., Phila.*, 1895, xxix, 232.

For Whooping Cough. Herbert B. Carpenter believes that bromoform gives better results than any other treatment for this dangerous and distressing disease. After the paroxysms have diminished a change of air, especially sea air, is most beneficial. As bromoform is but slightly soluble in water, it is best to add some alcohol to the solution, giving it in the following manner:

Bromoform	48 drops.
Rectified spirit	4 fluidrams.
Distilled water	1 fluidounce.

Sirup of tolu, sufficient to make 3 fluidounces.
Mix.

Dose.—1 fluidram in water every four hours.

The taste is scarcely perceptible. It must be remembered that bromoform is very volatile and decomposes readily. It should therefore be kept in closed bottles and protected from the light.—*Phila. Polyclinic*, 1895, iv, 375.

EDITORIAL.

GASTRO-INTESTINAL DISEASES IN CHILDREN.

IT cannot be denied that diseases of the stomach and intestines are of more frequent occurrence in infants and children than those of any other part of the body. They form an especially large part of the work of young practitioners. In adapting itself to its new life the infant must revolutionize its methods of breathing and of feeding. Nature has provided amply for these changes, but the *fin de siecle* breast is ornamental rather than useful. The innumerable substitutes for mother's milk handicap many an infant in its struggle for existence. It is indeed fortunate for the babies that they do not have to depend upon their mothers for breathing purposes!

Gastro-intestinal diseases in children differ from those of adults in many particulars, the recognition of which is of great value in determining the line of treatment to be pursued in individual cases. In the one, the causes are usually mechanical or hygienic; in the other, the very important group of mental causes play an important part. In adults, the causes are often reflex; in children, the effects are more frequently reflex. The recognition of the latter is of great importance; some, such as convulsions, high fever, urticaria, etc., are of daily occurrence; others, like localized clonic movements, aphasia and hemiplegia are much rarer.

There are also marked pathological differences; for in children the shorter duration does not often permit many of the tissue changes which are found in adults. The gastro-intestinal mucosa may be profoundly altered where the process is unusually severe, but the changes in the muscularis are relatively infrequent. Disorders of functions rather than diseases of tissue are characteristic of children.

The unreliability of the symptoms of stomach and intestinal diseases in children is notorious. Many adults are unable to locate their complaints properly; that children should so often lead us astray need not occasion any surprise. The highest diagnostic acumen will often be requisite not alone to place the true value upon the various manifestations of these diseases in children, but also to distinguish the many disorders which simulate them.

The constitutional diseases to which so much attention has recently been paid, such as scurvy, rickets, etc., would be much less frequent if proper attention were paid to the gastro-intestinal tract. It might be well to call attention to the more remote effects of improper feeding, mal-assimilation and imperfect metabolism. These remote effects are more profound than appears at the first glance. Many of the obstinate cases of skin diseases (eczema, psoriasis, etc.,) headaches, anæmia, chorea and epilepsy owe their protracted courses to imperfect metabolism, especially in the intestinal tract. It would be wise if this factor were carefully eliminated in all these cases before we refer them in despair to the specialists.

The exact methods of diagnosis which form so characteristic a feature in gastric diseases in adults have not been so useful in children. It is to be sincerely hoped that the future will enable us to apply these methods to them also.

On the other hand the mechanical treatment of gastro-intestinal diseases has not received that recognition in children which it deserves. The brilliant results which have already been reported in the treatment of acute gastro-enteritis, dilatation of the stomach, dysentery, constipation etc., ought to encourage physicians to employ these methods more than they have heretofore. The stomach and rectal tubes have been unduly neglected.

M. MANGES, M.D., NEW YORK.

SOCIETY REPORTS.

BRITISH MEDICAL ASSOCIATION.

ANNUAL MEETING, JULY 30TH TO AUGUST 3RD, 1895.

THE annual conference of the British Medical Association, which was held this year in London, was a great success in every respect. By no means the least important part was that devoted to Diseases of Children, at which Section many valuable papers were read. In several of the other Sections also, the manifestations of disease in childhood occupied a prominent place, notably in connection with the subjects of rheumatism and the serum treatment in diphtheria.

Congenital Syphilitic Manifestations in Bones and Joints.—The President of the Section for Diseases of Children, Mr. J. H. Morgan, opened a discussion on this subject. He stated that in infants bone changes originate more especially in connection with the extremities of the humerus and the tibia. The inflammation extends from the epiphysis to the periosteum, with consequent thickening around the end of the bone, and a condition of pseudo-paralysis is frequently present. If suppuration takes place, the pus is apt to invade the neighboring joint with disastrous results. In older children nodes form on the long bones, and necrosis of the palate and nasal bones is often met with. He regarded syphilis and rickets as distinct diseases, the latter produced for the most part by a faulty diet, and in some cases induced by the debilitating effects of congenital syphilis. With this view Dr. Thomas Barlow thoroughly agreed, and stated further that although in the majority of cases cranial bosses and cranio-tabes were dependent on syphilis, he had convinced himself that in certain cases rickets was the only associated disease.

The Nervous Sequelæ of Infectious Disease.—Dr. H. Handford divided these into three classes for purposes of convenience,—namely: (1) Cerebral and Meningeal, (2) Spinal, and (3) Peripheral, and described illustrative cases. He pointed out that as the toxin of diphtheria showed marked selection as to the peripheral nerves affected, so in the case of other fevers a similar, although perhaps not so well marked, selective tendency may be observed.

The Treatment of Hernia in Children.—The different measures employed in the operative treatment were described in detail by various surgeons, and most of the speakers were of opinion that Macewen's operation gave the best results. Mr. Rushton Parker gave his experience of forty cases treated by operation; three had died, two from peritonitis and one from bronchitis:

in two cases recurrence of the protrusion took place some months after operation; and in twenty-five cases which he had been able to follow up there had been no further trouble. It was the general opinion that the truss treatment could not be depended on in out-door hospital practice.

Acute Rheumatism and Allied Affections.—A most interesting discussion took place on this subject in the Section of Medicine. Dr. Cheadle regarded rheumatism as a general disease of which the most striking sign, in the case of adults, is arthritis, but in the case of children this sign occupies a much less important place. The appearances in early life gave a much truer picture than those developed later on. Amongst rheumatic diseases he included endocarditis and pericarditis, chorea, purpura rheumatica, subcutaneous nodules, and the exudative erythemata. Chorea and endocarditis were sometimes found in association with scarlet fever, but even in such cases he believed that there was a rheumatic basis. While it might be difficult from one of the above named conditions to pronounce definitely that a case was one of rheumatism, the presence of two or more in combination was quite diagnostic. Further, in such cases a hereditary tendency to the disease was usually present, and this was strongly confirmatory evidence. There was probably some morbid agent at work in the production of rheumatism, and he was inclined to anticipate that this would prove to be a specific micro-organism, somewhat analogous to that of pneumonia or tubercle. With this view Sir Dyce Duckworth expressed his agreement, and he further laid stress on the diathetic tendency which is transmissible from parent to child. Those possessed of this tendency, especially when in a debilitated state, afforded a suitable soil for the growth of the micro-organism, whereas in others who did not have this tendency rheumatism would not probably develop under any circumstances. With reference to the association of rheumatism and chorea, Dr. Garrod suggested that the organism of rheumatic fever might produce some poison of the nature of a toxin, which selected the nervous system and led to the development of choreic symptoms, in a manner analogous to that by which the paralytic sequelæ of diphtheria are produced. Dr. Newsholme referred to the evidence he had already published of the epidemic prevalence of rheumatic fever in certain years. He considered that the question of the infective nature of rheumatism could only be solved by the compulsory notification of all cases which would ensure sufficiently full and correct statistics. Sir T. Grainger Stewart brought forward a case which suggested that rheumatism might begin as a local affection, and that constitutional symptoms might not develop for some days. Dr. D. B. Lees viewed erythema nodosum as a distinct disease, with a definite eruption and duration, without cardiac complications, and, as far as his experience went, without recurrent attacks. He supported the infective theory of rheumatic fever, and regarded chorea as a rheumatic manifestation. The occasional absence of the knee jerk in chorea was comparable to the same condition in diphtheritic paralysis, and probably of similar origin,—namely: from the action of a blood poison on the nervous system.

SECTION ON PEDIATRICS, N. Y. ACADEMY OF MEDICINE.

Stated Meeting, Oct. 10, 1895.

Morphinism in Children. Dr. J. B. Mattison, of Brooklyn, read a paper on this subject in which he stated that although the literature of this subject was extremely scanty, he believed that the condition was not very uncommon in children. Among the illustrative cases was the following remarkable one: A baby of seven months when first seen presented the shriveled and wrinkled appearance of an old man, and attracted one's attention by its peculiar, solemn manner. It was learned that the child had been perfect at birth, and had thrived up to the age of four months, when in order to quiet it when fretful it was given paregoric. It very soon became necessary to give laudanum, and also to increase the dose, so that when first seen by the physician, it weighed only seven pounds, was shockingly emaciated, and extremely weak. It was taking at this time no less than one ounce of laudanum daily. The laudanum was reduced one drop at each dose, and at the end of one month the child had become plump and well again. The speaker said that there were those in the profession who insisted that the chief factor in the causation of morphinism was moral obliquity, but cases like those just cited were in themselves sufficient to show that this theory was wholly untenable. In his experience, children showed a very strong tendency to become victims of morphinism. The consequences of this habit in the young were speedy decline and death, if not promptly treated; but if there were no structural lesion, and nutrition had not been too greatly impaired before coming under treatment, every case could be cured by judicious management. It was, in his opinion, monstrous to think of withdrawing the morphine abruptly in adults, and certainly it should not be thought of in children. The gradual withdrawal of the drug together with general tonic measures constitute the whole treatment. His reason for thinking that morphinism was much more common in children than the literature would seem to indicate, was the extensive and reckless use of many nostrums for children, nearly all of which contained opium in some form. If the physician would instruct mothers regarding the great risks incurred in using all such preparations for their children, and at the same time the sale of these nostrums were under national or state control, much would be accomplished in the way of mitigating this terrible evil.

Dr. J. H. Fruitnight said, that in an extensive experience, he had never encountered the congenital form of morphinism in the young, but he had frequently seen the acquired form, as a result of dosing them with soothing syrups and cough medicines.

Dr. E. A. Tucker said that he had seen one case of congenital morphinism in the hospital. It was the offspring of a mother, who, for several years previously, had been addicted to taking morphine, and also to smoking opium. At birth the child appeared to be perfectly healthy, but when handed over to a wet-nurse it began to lose ground rapidly. This he had attributed to the sudden removal of the baby from the influence of the morphine to which it had been subjected *in utero*. In the future, he would be disposed to try the effect of giving the child for a few days after birth, small doses of morphine, and gradually withdrawing it altogether.

The chairman described a case illustrating the difficulty in many instances of determining positively that the child is a victim of this drug habit. A child who had been unusually docile and free from excitement while under the care of the nurse, suddenly became almost maniacal when the nurse was called away for a day or two. This outburst was evidently due to the child being suddenly deprived of the drug.

Infection of the Central Nervous System in the New-Born. Dr. Ira Van Gieson, in a paper with this title, reported the only two cases of acute exudative meningitis that had been observed in the new-born in the Sloane Maternity Hospital,as a result of infection from the umbilicus. These cases were very carefully recorded,including the results of a bacteriological examination. On inspection there was no evidence of any abnormal condition about the umbilicus, but on dividing the umbilical vein, this vessel was found to contain pus. Pure cultures of the streptococcus pyogenes were obtained from the meninges and from the umbilicus. Microscopical examination showed a severe acute exudative meningitis. The other organs were normal.

Dr. Tucker said that he had seen several cases illustrative of this remarkable fact, that the pathogenic bacteria in their passage from the umbilicus may pass over certain viscera, and ultimately find a lodgment in some remote part. The only effective treatment for these infections in the new-born was a prophylactic one, and this consisted in carefully dressing the umbilicus with a dry, clean powder.

Dr. Fruitnight said that in the earlier years of his practice when moist dressings for the cord had been in vogue, he had seen suppuration of the umbilicus much more frequently than since he had adopted the practice of using dry dressings.

Several other speakers expressed similar views regarding the efficacy of this treatment of the navel.

The Promiscuous Use of Pocket-handkerchiefs. At a recent meeting of the Dublin Sanitary Association, the president, Dr. J. W. Moore remarked upon the spread of coryza by the common use of pocket-handkerchiefs. One of the commonest maladies is "cold in the head," or, as it is technically called, "coryza." It is notoriously infectious, and the means of communication is the discharge from the nostrils. He was satisfied from repeated observations that this troublesome affection often spreads through a family of children and then through an entire household through the promiscuous use of pocket-handkerchiefs. A little child comes to the nurse with the request "Blow my nose." This is carelessly or thoughtlessly done with the parent's or attendant's pocket-handkerchief, which thus becomes infected and spreads the attack. In other cases the soiled pocket-handkerchief is allowed to dry without disinfection, and the dried discharge from the diseased mucous membrane of the nose is then diffused through the air, spreading the malady just as measles is spread.

These remarks might be applied to phthisis as well as to coryza. *Clinical Sketches, London*, 1895, ii, 91.

Remedy for Insect Stings. A paint for the stings of insects, in which ammonia is kept in close and prolonged contact with the affected part, is said to be made as follows:

Water of ammonia	ʒi
Collodion	♏xx
Salicylic acid	gr. ii

M. sig. A few drops to be applied to each bite or sting. *Popular Sc. News*, 1895, xxix, 104.

BOOK REVIEW.

A Treatise on the Nervous Diseases of Children for Physicians and Students. By B. Sachs, M.D., *Professor of Mental and Nervous Diseases in the New York Polyclinic, etc.* (Wm. Wood & Co., New York. 645 pages, 162 illustrations, $5.00.)

SOME books are to be tasted, others to be swallowed, and some few are to be chewed and digested. The book before us, is one of the latter kind. A kind which Bacon considered proportionately uncommon.

Numerically the nervous diseases of children are not very great, but from a viewpoint of their influence on the future welfare and life of the individual, their occurrence is of the greatest significance. That a child who has or has had measles, or diphtheria, or entero-colitis, is the more made liable to diseases of a similar nature is absurd. In combating such diseases the physician has a limited problem to deal with, viz., first, to search for their origin, which, on account of being exogenous, is much more liable to be successful; second, to limit their development within the system, or what really amounts to the same thing, to anticipate those occurrences which so follow in the decline and wake of the disease that they have come to be known as sequelæ.

With nervous diseases the matter is different. That a child who has convulsions in infancy is liable to some convulsive disorders later in life no one will gainsay. Manifestations of instability of the cortico-motorial tract in the shape of convulsions in early life, should prompt the physcian to be watchful for other nervous phenomena at a later and perhaps more critical time in life. It is unnecessary to invoke the aid of statistics to prove that children who have pavus nocturus, chorea, or neuritis, are more liable to other nervous disease at some subsequent period than children who have been spared such afflictions. The problem of the origin of nervous diseases is much more complicated than the other diseases of childhood, for with few exceptions, such as the acute inflammatory and humoral diseases, the diseases of the nervous system are endogenous, teratological or protal. And as such they present difficulties in the way of their comprehension from a genetic stand-point.

Let us take, for instance, one class of nervous diseases, the so-called family diseases. A few years back, absolutely nothing was known of this class of diseases; yet to-day it is not hazarding the tenure of one's prophetic reputation to say that this group will sooner or later be found to include a great proportion of the chronic, degenerative nervous diseases that manifest themselves in childhood.

A consideration of facts such as these leads us to the conviction that the recognition, the prevention and treatment of nervous diseases of childhood,are duties worthy of the physician's most intelligent attention. To assist the physician in attaining this end, the book before us can be recommended. The book is contained in an introductory chapter, two parts, one devoted to general nervous diseases, the other to the organic diseases of the nervous system, and an appendix.

The introductory chapter describes methods of examination. In no other branch of medical science does careful, methodical, intelligent examination lead so reliably to a correct diagnosis as in neurology. The converse of this statement is also true. This chapter calls for especial commendation, not only for the subject matter which is clearly presented, but for the pains to which the author has been to state in detail the various procedures which are absolutely essential, at least to the beginner. By the judicious use of tables and illustrations, he has succeeded in presenting a really massive amount of information, and that of the most useful kind.

Part I. is devoted to the general nervous diseases and Part II. to the organic diseases of the nervous system. The author has departed from the usual custom by presenting first the functional disorders. This arrangement will commend itself to the practitioner. It is of the utmost importance to keep in mind the intimate relationship between, for instance, convulsions in children and epilepsy.

We do not by any means wish to be understood as saying that infantile eclampsia means epilepsy later in life; but we do mean to say that our experience in inquiring into the predisposing and causative factors of epilepsy has led us to the firm conviction, that the great majority of children who develop epilepsy before the time of puberty, have had convulsions in infancy. As was said in the beginning, this coincidence may be of no other significance than that it points to a certain lack of stability in the central neuron and from a clinical point we would ask that so much be conceded.

Another point in the discussion of epilepsy which we believe the author has done well to emphasize, is the comparative infrequency of cases of hereditary (idiopathic) epilepsy.

The chapters in Part I. that call for special commendation are those devoted to epilepsy, hysteria, and migraine. The pathology of epilepsy, both inferential and determined; the clinical manifestations of the disease; that extremely important matter, the management of patients afflicted with epilepsy, are put down in a masterly and convincing manner, and after reading it one feels that both the faddist and the nihilist in the treatment of epilepsy have had their claims weighed and not allowed.

In his conception of hysteria the author is inclined to take the most advanced and substantial view of it, which places it more properly among the mental than the purely nervous disorders, using the latter term in its colloquial and every-day sense. We are sure that his positive statement, that hysteria is a rare disease, in this country at least, not only in the adult, but extremely so in children, will be concurred in by every one who has seen much of nervous diseases, and it should go a long way towards throttling the impulse which prompts some to label every nervous manifestation which they do not understand as "hysterical" and therefore to be sneered at.

The chapters devoted to chorea and the choreiform diseases, as well as those treating of tetanus and tetany, are characterized by the elimination of antiquated theories, by the absence of padding, and the presentation of facts in a scientific and readable form.

In part II. the diseases of the peripheral nerves are first considered, and especially interesting is the chapter on multiple neuritis, a condition which, with the exception of polyneuritis occurring after diphtheria, has been considered to be extremely rare in children.

We regret that Landry's paralysis is accorded the dignity of a separate consideration in the chapter on myelitis, and although the author considers it probable that all parts of the nervous system may be involved, we are of the opinion that enough evidence has been brought forward to warrant its being considered unreservedly as a septic form of polyneuritis. Certainly the origin of the peripheral neuron may be found diseased in fatal cases, but this does not in the least militate against our contention. The development, its outset, its clinical course, its pathological accompaniments, its associated conditions and sequelæ, its termination whether in death or recovery, are all more in keeping with septic disease of the peripheral portion secondary neuron.

The diseases of the spinal cord are introduced by a brief up-to-date resumé of the anatomy, physiology, and pathology of this part of the body.

Physiologists and anatomists owe to Waldeyer a debt of gratitude for the introduction of the word neuron; less, it is true, than to Golgi, Cajal, and their followers who made such a conception possible. For the neurologist, the neuron has been the rock on which many an unworthy theory concerning the cause of nervous disease or the explanation of clinical manifestation have been wrecked. The propagation of the neuron theory has contributed more to a better comprehension of the protal diseases of the nervous system than has any recent discoveries.

The chapters here which we would especially commend are those devoted to the hereditary or family diseases of the spinal cord and to the progressive muscular atrophies. Our conception of both of these diseases is, at the present time, going through a very important evolutionary stage, and although it may even yet seem to the mind of the casual observer that the facts concerning these two conditions are in a very chaotic state, his mind will be relieved of such erroneous ideas by the perusal of these chapters.

There is probably no more puzzling chapter in neurology to the beginner than the progressive muscular atrophies. The spinal form, the muscular form, the neural form, all have in common the one striking symptom, atrophy. To differentiate these forms we consider an imperative necessity, for more reasons than one. In the first place there is some reason for entertaining the hope that we shall discover a therapeutic measure to combat the dystrophies; and, at least, it may be justifiably said that cases of muscular dystrophy should be subject to an entirely different treatment than cases of spinal muscular atrophy. And again, in the opinion of the reviewer, such disease as hereditary cerebellar ataxia, hereditary spastic paralysis and hereditary progressive muscular atrophy, should not be allowed to show itself in more than one individual before parents are counselled as to their duty in preventing the further propagation of the disease. Perhaps in no other work in the English language are the hereditary and family diseases of the brain and spinal cord so masterfully handled as in the book under consideration.

The part of the book devoted to diseases of the brain is built on the same plan as the part which treats of the spinal cord. The illustrations and diagrams to illustrate these chapters have been judiciously selected and carefully executed. Meningitis and epidemic cerebro-spinal meningitis are considered from a modern pathalogical point of view. We are sorry the author did not present more exhaustively the subject of encephalitis, for it is safe to say that there is more of encephalitis Simon pure, and in combination, than books have taught us heretofore.

The infantile cerebral palsies are discussed exhaustively. The same may be said of abscess of the brain and thrombosis of the intracranial sinuses, a subject on which we cannot have too much light or too much reflexion of personal experience.

The closing chapters are taken up with a discussion of the common forms of diseases of the mind as seen in childhood, and the subject of idiocy and imbecility. The appendix, of a few pages, contains special reference to such measures as the rest cure, hydrotherapy, etc.

The book is well printed and well bound. That the illustrations are helpful, not only to elucidate anatomical facts and relationships, but in impressing clinical features we imagine will be conceded by every one. The author's style is characterized by virility, his diction by lucidity and his description by detail.

The volume is an addition to pediatrics and to neurology. In fact it may be said and with truth, that it can scarcely fail to advance a comprehension of the former and the position of the latter.

JOSEPH COLLINS, M.D., New York.

NEW BOOKS.

The Deformities of the Human Foot: With their Treatment. By W. J. WALSHAM M. B., C. M. ABERD, F. R. C. S. Eng., *Senior Assistant-Surgeon, Surgeon in charge of the Orthopædic Department and Lecturer in Anatomy, St. Bartholomew's Hospital etc.*, and William Kent Hughes, M. B. Melb., M. R. C. S. Eng., L. R. C. P. Lond., *Orthopædic Surgeon at St. Vincent's Hospital, etc.* (New York: William Wood & Company. 1895. Price, $4.50.)

Immunity, Protective Inoculation in Infectious Diseases and Serum Therapy. By GEORGE M. STERNBERG, M.D., LL. D., *Surgeon-General U. S. Army, etc.* (New York: William Wood & Company. 1895.)

The Surgical Diseases of Children and their Treatment by Modern Methods. By D'ARCY POWER, M. A., M. B. Oxon., F. R. C. S. Eng. 548 pages, with Illustration. (P. Blakiston, Son & Co. 1895.)

Tuberculous Disease of Bones and Joints, its Pathology, Symptoms and Treatment. By W. WATSON CHEYNE, M. B. Ed., F. R. S., F. R. C. S. 347 pages with sixty three illustrations 1895. (Young J. Pentland, Edinburgh & London.)

Treatment and Education of Mentally Feeble Children. By FLETCHER BEACH, M. B., F. R. C. P. London. 32 pages. (J. and A. Churchill. London. 1895.)

Deaf Mutism. By HOLGER MYGIND, M.D., Copenhagen. 300 pages. (F. J. Rebman, London.)

The Diseases and Deformities of the Foetus: An Attempt towards a System of Ante-Natal Pathology. By J. W. Ballantyne, M.D., F. R. C.P. E., F. R. S. E. Vol. II. With plates. 264 pages. (Oliver & Boyd, Edinburgh. 1895.)

Disinfection and Disinfectants. (An introduction to the study of.) By SAMUEL RIDEAL, D. Sc. (Lond.) 328 pages. (Charles Griffin & Co., London.)

Pediatrics. The Hygiene and Medical Treatment of Children. By THOMAS MORGAN ROTCH, M.D., *Professor of the Diseases of Children, Harvard University.* 400 Illustrations. 1000 pages. (Phila. J. B. Lippincott Co. 1895.)

ABSTRACTS.

THE TREATMENT OF TUBERCULOSIS IN CHILDREN WITH IODOFORM INJECTIONS.

Wieland (*Deutsche Zeitsft Chirurg.*, 1895, 41 Band., 378), finds the conservative treatment, with 10% iodoform injections, of tuberculosis of the soft parts, bones and joints, much more satisfactory in children than in adults; and analyzes in support of this view, the report of the Children's Hospital of Basle for the last five or six years.

He finds that tuberculous abscesses treated in this way healed very often. The method employed was to empty the abscess with an aspirator, then irrigate with a 4% boracic acid solution and, after the cavity had been well washed out to inject 20 to 50 ccm. of a 10% iodoform emulsion, either in glycerin or oil or in water adding a small quantity of gum arabic to hold the iodoform in suspension. As often as the abscess refilled, the operation was repeated.

It is essential to keep the part treated at rest, and to firmly support it with a flannel bandage.

Of twenty-one cases treated in this manner, sixteen or 80% were fully cured, four were removed from the hospital by parents before treatment was completed and one case was a positive failure. In eleven of the sixteen successful cases, one injection sufficed; in one two were necessary; and in four the patient required three injections. Fistulæ at the point of injection occurred four times and once there was a septic infection of the large abscess.

Twelve cases of joint tuberculosis were treated in this way. Nine or 75% were cured and two cases were much improved. Joint cases required from six to thirteen injections given during a period of two to six months.

Four cases had acute nephritis from the iodoform which, however, speedily disappeared. In one case there was severe iodoform intoxication but in this case 20% emulsion was employed.

SCORBUTUS IN INFANCY.

Dercum (*Med. and Surg. Rep.*, 1895, lxxii, 509), reports a severe case of scurvy, which recovered rapidly after the diagnosis was made and the proper treatment instituted. This treatment consisted in cold sponging; wet compresses around the legs and thighs, which were thickened and very tender; the administration of dilute sulphuric acid and ergot in drop doses; and a diet of raw milk, raw beef juice, orange and lemon juice. During convalescence cabbage, potatoes and tomatoes were given.

THE TREATMENT OF DIPHTHERIA WITH BEHRING'S SERUM.

After treating a large number of cases at the Mariahiefer Hospitals of Aix-la-Chapelle, F. Wesener (*Muenchen Med. Wochensft* 1895, 853 and 883), in an excellent paper, in which a large number of cases are well observed and analyzed, comes to the following conclusions:—

In simple pharyngeal diphtheria serum therapy alone will do no more than a properly applied local treatment, nor will it do less. It prevents apparently the extension of the process to the larynx better than local treatment, but it does not prevent with certainty the occurrence of sepsis.

In laryngeal diphtheria a tracheotomy or other treatment for stenosis, is somewhat less frequently necessary with the serum treatment than with other methods.

In laryngeal diphtheria the serum treatment prevents the extension of the disease to the trachea and bronchi better than any known remedy. If, however, these parts are already involved, it is very doubtful if the serum will be of benefit.

When sepsis is present, serum will be of little benefit, even less than other methods of treatment.

It is not positively established that serum has immunizing powers.

The serum treatment is not harmful.

THE TRANSMISSION OF SCARLET FEVER.

Grasset (*Ann. d. Hyg.*, Paris, 1895, xxxiv, 143) reports that a child visiting away from home was taken ill with scarlet fever; the friends remarking that the desquamation was like the casting of a snake skin, wrote a description and enclosed three pieces of skin for the parents. Six and a half days after receipt of the letter, a baby brother of the first child, living at home, took the disease.

The only other case of transmission of contagion by letter reported, was published by Sanné. In this case two persons received a note from a convalescent from scarlet fever, who wrote that she was desquamating so freely that she had to brush the fine scales off the note-paper on which she wrote. Some days later both recipients became ill with the disease.

BRONCHORRHEA, CONGENITAL, AND PROBABLY INDUCED BY MATERNAL IMPRESSION.

Dr. J. Madison Taylor (*Phila. Polyclinic*, 1895, iv, 21) reports the case of a small female baby, five weeks old, who suffered from a most distressing constant cough, and excessive watery expectoration. This condition had been present since the birth of the baby.

The mother was a fine, healthy woman, about forty years of age, and was subject to occasional attacks of bronchitis with excessive secretion. During the last pregnancy, she suffered unusually from bronchorrhea but not for a month or more before labor.

The child coughed profusely from the beginning and the act of suckling was perpetually interrupted by a filling up of the naso-pharynx by the bronchial secretion, causing dyspnea and exhaustion, and, moreover, increasing mechanical disturbance of the stomach, with vomiting. Mother and child gradually failed in strength from the ceaselessness of the strain. Medicines appeared powerless to check the flow. The heart and respiration grew steadily weaker as nutrition failed from reflex vomiting, as well as from fatigue caused by excessive efforts at suckling against the opposition offered by rapid filling up of the nose from below; and the child died at six weeks from pure exhaustion, or, more likely, drowned in its own exudations. Autopsy was not allowed.

THE MELÆNA OF THE NEW BORN.

Romme (*Arch. d. Tocol. et d. Gynec.*, Paris. 1895, xxi, 25) in an article of some length discusses the various theories of the etiology of melæna of the newly born. He finds that infection is the only satisfactory explanation, and that so many different varieties of bacteria have been demonstrated, melæna must be considered a symptom like purpura.

RESUSCITATION OF STILL-BORN INFANT BY RHYTHMICAL TRACTIONS ON THE TONGUE.

Erskine (*Med. and Surg. Report*, 1895, lxxii, 525) reports this case. The child was born asphyxiated and the usual methods of artificial respiration were tried for ten minutes without success. The tip of the tongue was then held by a small artery forceps and rhythmical tractions were made so that twenty to twenty-four were produced each minute. In about six minutes the nostrils began to flutter and in less than ten minutes normal respiration was established.

GONORRHŒAL RHEUMATISM IN A NEWLY BORN.

Haushalter (*Semaine Med.*, Paris, 1895 ,xv, 382) reports a case of gonorrhœal rheumatism accompanying gonorrhœal ophthalmia in a child twenty-five days old. The knee and ankle were affected and gonococci were found in the exudation within the knee joint. This case is the eleventh on record in the newly born.

BLOOD CHANGES IN A CASE OF INFANTILE MYXŒDEMA.

Labreton and Vaquez (*Bull. et. Mem. Soc. Med. d. Hop. de Paris*, 1895, xii, 22) report that in children affected by myxœdema the number of red blood globules falls very low, even to 1,750,000; the white globules to 4,500 and the hæmoglobin 65%. There are some nucleated globules which give the blood a fœtal character. The number of globules of each variety increases under the influence of thyroid gland.

HYPERTROPHIC CIRRHOSIS OF THE LIVER IN INFANTS.

Gilbert and Fournier (*Rev. Mens. d. Mal. de l'Enf.*, Paris, 1895, xiii, 309) report seven cases of hypertrophic cirrhosis of the liver with jaundice, in children. Six of them were under 14 years of age and one 19 years old. They note that the symptoms and the course are similar in children to those in adults, but that there are three peculiarities of the disease in the former.

First, great increase in the size of the spleen may be present with or without much increase in the size of the liver, and the splenic tumor may seem to be the feature of the disease. Second, in certain cases there are bone and joint lesions and third, there is a considerable lack of general development.

THE TREATMENT OF DIPHTHERIA BY ANTITOXIN.

William H. Welch (*Bull, Johns Hopkins Hospital*, 1895, vi, 97) gives a clear and convincing statement of the true position of antitoxin in the treatment of diphtheria. After a careful analysis of over seven thousand cases obtained from eighty-two reports, he concludes from a study of the evidence that the following points seem to be established:

Most writers approve of the continuance of such measures of local and general treatment as have hitherto been found to be useful, but recommend the avoidance of all irritating and caustic local applications.

The injection of the serum may be followed in a few hours by local pain, swelling and redness, but there is no danger of abscess formation if the serum is uncontaminated and proper antiseptic precautions are taken. In over 3000 injections Martin observed the formation of an abscess only three times.

In twenty-four to forty-eight hours after the injection the general condition of the patient is remarkably improved in the great majority of those patients who are in a condition to be benefited at all by antitoxin. This general improvment is accompanied by a fall of temperature, which may be a critical fall, especially if the disease is not far advanced; often it is a fall by lysis. Some hold that there may be a temporary rise of temperature as an immediate effect of the injection. Accompanying the fall of temperature is improvement of the pulse as to frequency and tension, but the heart's action may for some time, even into the period of convalescence, remain weak.

In the favorable cases the local diphtheritic process is arrested, usually within the first twenty-four hours after the injection. Membrane may appear upon spots previously inflamed and invaded by the bacilli, but otherwise there is no extension of the membrane in the majority of the cases which are benefited. The area covered by membrane becomes sharply demarcated and the swelling of adjacent mucous membrane disappears. The membrane may disappear by rapid separation or by gradual softening. Sometimes it persists for several days after disappearance of all other local disturbance. Large membranous casts are coughed up from the larynx, trachea and bronchi under the serum treatment more frequently than under former methods. The rapid separation of the membrane in the lower air passages may cause sudden increase of stenotic symptoms. Nasal discharge is lessened. The swelling of the glands in the neck and the surrounding œdema disappear, so far as these are not referable to secondary infections.

The most uncertainty prevails as to the influence of antitoxin in preventing the three most important complications or sequelæ of diphtheria, nephritis, heart failure and paralysis. The weight of evidence is that genuine nephritis is far less common in cases treated by antitoxin sufficiently early than under other methods of treatment, but it is questionable whether albuminuria is less common, although it is considered to be by Kossel, Roux and others. If there is an albuminuria in any way directly referable to the injection of the serum, and this is by no means established, it is simple albuminuria with perhaps a few narrow hyaline casts but without evidence of any serious damage to the kidney. Peptonuria, it is claimed by Hecker, is an effect of the serum, but it is without clinical significance. Albuminuria is such an extremely common symptom of diphtheria that it must be very difficult to determine that it can be referred to the serum in any case.

Many writers emphasize especially the favorable influence of antitoxin upon the heart, but there are some who have observed that with decided improvement in all other symptoms the force of the heart may still remain weak and occasion anxiety. Baginsky's experience is that the minor disturbances of the cardiac action are not less frequent in cases treated with serum, they appear to be even more frequent as a larger number of cases survive, but that actual death from heart failure is far less common in the serum cases than in others.

Post-diphtheritic paralysis may occur in cases treated with serum as early as the second or third day of the disease.

Whether they occur in cases treated within the first twenty-four hours is not certain. According to some, paralysis is even more common in the serum cases than under former methods of treatment. This is doubtful, but if true, it may be attributed to the survival of a larger proportion of cases.

It is apparent from what has been said that antitoxin is most strikingly beneficial in progressive fibrinous diphtheria and especially in the prevention and cure of laryngeal diphtheria. In septic diphtheria the serum treatment is of little avail.

Antitoxic serum may produce unpleasant effects, but these do not involve danger to the patient. They are in all probability referable to the serum as such and not to the healing, so-called antitoxin, substance contained in the serum. The most common undesired effect is some form of exanthem, usually erythema and urticaria, sometimes an eruption like measles or scarlatinal rash. The same exanthems have been observed by Bertin after the injection of ordinary serum of the horse, and by Richardière after injection of Marmorek's anti-streptococcus serum.

The serum from some horses is more likely to cause these exanthems than that from others, and there may be individual idiosyncrasies favoring their occurrence. Some writers report the occurrence of an exanthem in not more than five per cent. of their cases, others have observed them in over fifty per cent. of the cases treated with serum. They may be localized in the neighborhood of the seat of injection or extend from that over the greater part of the body, or make their first appearance at a distance from the point of injection. Often without noticeable fever they may be accompanied by considerable elevation of temperature and by pain and swelling in the joints. A rarer but more severe form of serum exanthem resembles erythema multiforme, and when this is accompanied, as it may be, by high fever, and severe pain in the bones and joints with swelling of the joints, the condition of the patient may really seem serious, but these patients recover. Some have attributed a petechial eruption to injection of the serum, but this may occur in diphtheria without serum treatment.

These occasional untoward effects of the healing serum are annoying, but, being unattended with danger to life and without serious consequences, they do not contraindicate the use of the serum.

There have been a few cases reported in which the writers, without any satisfactory evidence whatever, have referred the death of the patient to the use of the serum. The essential harmlessness of the serum has been demonstrated by over a hundred thousand injections, and if future investigations should show that through some idosyncrasy on the part of the patient death ever is attributable to the injection of the serum, this would probably count for about as much as the rare deaths from the use of ether or chloroform.

The principal conclusion which he draws from this paper is that the study of the results of the treatment of over 7,000 cases of diphtheria by antitoxin demonstrates beyond all reasonable doubt that anti-diphtheric serum is a specific curative agent for diphtheria, surpassing in its efficacy all other known methods of treatment for this disease. It is the duty of the physician to use it.

The later reports show in general a decided improvement in the results of the treatment over the earlier ones, and there is every reason to believe that the results of the second year's employment of the new treatment will make a much more favorable showing than those of the first year. We shall come to a clearer understanding of the mode of action of the healing serum. Improvements in the methods of preparation and preservation of the serum, and possibly the separation of the healing substance, at least from other ingredients which produce the undesired effects, may be expected.

The discovery of the healing serum is entirely the result of laboratory work. It is an outcome of the studies of immunity. In no sense was the discovery an accidental one. Every step leading to it can be traced, and every step was taken with a definite purpose and to solve a definite problem.

These studies and the resulting discoveries mark an epoch in the history of medicine. It should be forcibly brought home to those whose philozoic sentiments outweigh sentiments of true philanthropy, that these discoveries which have led to the saving of untold thousands of human lives have been gained by the sacrifice of the lives of thousands of animals, and by no possibility could have been made without experimentation upon animals.

ON PICA OR DIRT-EATING IN CHILDREN.

John Thomson (*Edinburgh Hosp. Rep.*, 1895, iii, 81) gives the notes of eleven cases which illustrate in a tolerably characteristic way the clinical history which is generally obtained in cases of this morbid condition. In some cases only one or two abnormal things were eaten; in many almost anything within reach was swallowed; and it seems that the variety of unnatural substances craved for is much more limited in cachetic cases than in those beginning in young babies. Children suffering from pica for some time have a peculiar look about the face. Their complexion is dull and unhealthy, and they are often hollow-eyed with a hungry and unhappy look.

In these cases in which the children were allowed to indulge their craving to any great extent, there was always some diarrhœa, and occasionally obstruction from impaction of hard bodies in the rectum. In none of these cases was the patient ever seriously ill as the result of the habit, but instances have been recorded which have ended fatally. It was interesting to notice that in cases where the habit was formed in early infancy, and where the patient was some time under observation, the craving ceased about the age of three years. This seems probably connected with the growth of the child's intelligence and the widening of its interests.

The nature and etiology of pica constitute a very difficult question; but it seems natural to class such cases as a minor *psychosis*, along with such "bad habits" as sucking of the thumb and fingers or of the tongue, masturabtion in little children, and the rocking to and fro (without implication of the genital organs) in which some young children find pleasure.

Treatment is only, to a very small extent, a matter of medicine. It must aim at the modification of any conditions which favor the continuance of the habit. The indications are mainly four: 1. Keep the child away from the substances for which he has a morbid craving. All habits are strengthened by practice, and their hold slackens under disuse. 2. Improve the condition of the digestion. It seems more than likely that local uneasiness often plays some part in the etiology. 3. Improve the general health. It is to the weakly that such cravings come, and the strong readily throw them off. 4. If possible, change the child's surroundings, and take his mind up with new things, and let him be kept busy and happy.

A PERSERVING THERAPEUTIST.

M. H. Barye, the medical officer in charge of the State dispensary at Phaltan, India reports (*Bost. M. S. J.* 1895, cxxxiii, *383*) the case of a female child of eighteen months treated by him for gastro-intestinal symptoms attended by fever, before his attention was called by the child's father to a marked enlargement of the liver, to which his treatment was directed. In spite of his care, and that of a native specialist, by whom the child was treated for eight days, and a journey to Poona for a consultation (the doctor seems rather surprised that this produced no diminution in the size of the liver) the child continued to grow worse. Homeopathy and electro-homeopathy were tried for some twenty days without effect, and a second journey to Poona finally ended the child's sufferings.

General edema, ascites and jaundice preceeded the child's death, which the doctor attributed to scirrhosis of the liver. In order, probably to prove that death was not due to lack of therapeutic resource on his part, the doctor publishes the following list of drugs which were tried in different combinations during the course of the treatment. Nothing is stated with regard to the details of their administration, but he naively informs us that the medicines which are marked with an asterisk produced some temporary effect, and only in one instance, that of citrate of caffeine, does he state what symptoms were favorably affected. If a child can die after such through drugging as this, and after consultations, electro-homeopathy and homeopathy itself there would seem nothing left for these cases but christian science.

1. Ammon chloridum.
2· Taraxaci.
3. Potass. iodidum.
4. Potass. bromidum.
5. Podophyllum.
6. Sodii sulphas.
7. Mag. Sulphas.
8. Iodine.
9. Arsenic.
10. Mercury.
11. Donavon's sol.
12. Ipecacuanha.
13. Acid nitro-hydrochloric dil.
14. Cascara cordial.
18. Calumba.
16. Quinine sulphas.
17. Sodii salicylas.
18. Digitalis.
19. Potass. bicarb.
20. Ingluvin.
21. Pepsin.
22. Berberis aqua folia—with eunomyn.
23. Caffein citricum—acted well for a time as a diuretic and stimulant—reduced dropsy and drowsiness.

The preparations of iodine, mercury and camphor were tried externally.

CONGENITAL SYPHILIS.

The manifestations of congenital syphilis have for fundamental character: 1st, the infection is not the result of penetration through the lymphatic system; 2nd, there are no primary sores; 3rd, it affects the whole organism, externally and internally.

The influence of the father on the syphilis of the child has been notably exaggerated, but it is nevertheless certain. The influence of the mother is absolutely certain, independently of all paternal disease; and the influence of the fetus on the mother has been proved beyond doubt by the works of Diday and Fournier.

The manifestations of infantile syphilis consist in lesions of the skin—pemphigus, roseola and vesico-pustules,—lesions of the mucous membrane—mucous patches and coryza,—visceral lesions—usually of the lungs, the liver and the testicle,—and osseous lesions—principally of the cranium and more especially of the parietal bones.

The treatment of infantile syphilis is simple enough. It suffices to rub in daily a small quanitity (about the size of a nut) of mercurial ointment in the abdomen, the calves of the legs, and chest. If cutaneous syphilides exist, a bath of corrosive sublimate is ordered, and for the mucous patches calomel ointment.—*Med. Press, London, 1895, lx. 343.*

Hulot (*Gaz. Hebd. d. Med., Paris*, 1895, 26) reports 30 cases of general staphylococcus or streptococcus affection in children, in which the origin of the germs was traced to the skin, which was affected by multiple local spots of suppuration. The general infection took place usually either through the respiratory tract, causing a broncho-pneumonia or through the digestive tract, causing an enteritis. At the Hospital des Enfants-Assistés, there have therefore been instituted sublimate baths and frequent washing of the mouth, throat and nose in such cases. Measles, Impetigo, varicella, herpes, pemphigus and eczema may all deserve these precautionary measures.

Trismus Neonatorum. Dr. J. W. Marcy reports good effects from the use of the tincture solanum carolinense, pushed to narcosis. In one patient, the only recovery out of eight cases, he began with seven drops every three hours, then gave it every two hours, and then increased the dose to fifteen drops every two or three hours, as was necessary to produce sleep, with instructions to stop the remedy when the child slept. *Phil. Polyclinic,* 1885, iv., 408.

The Addition of Soap Liniment to Cod-liver Oil Inunctions. Following the example of Dr. McKee, Dr. Wells has been trying the effects of the addition of soap liniment to cod-liver oil for inunctions in cases of rickets and chronic malnutrition in infants, and has found the mixture to work admirably, giving decidedly better results than inunctions of oil alone have given. The infant should be thoroughly washed in warm water and the whole body well rubbed with codliver-oil,3 parts to 1 part of soap liniment. The additional administration of phosphorus internally has not given any better results than the above mixture used alone. *Phil. Polyclinic,* 1895, iv, 432.

PEDIATRICS

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ORIGINAL ARTICLES.

A CASE OF CONGENITAL RICKETS WITH RECOVERY.

From the Service of Dr. William Thurman and Dr. Dillon Brown.

By VICTOR SAFFORD, M. D.,

Late Resident Physician to the Children's City Hospital, New York.

RUNATA CHICGADELLI, born in New York of Italian parents, was admitted to the Children's City Hospital of St. John's Guild, April 6th 1894. She was then four and one-half years old. She has been deformed and sickly since birth and has failed markedly since the mother stopped nursing her. The fact that the mother died in childbirth when the patient was about a year and a-half old, furnished the only clew obtainable as to the length of time nursed.

Her appearance was typically rachitic, and an examination showed the presence of old fractures of both clavicles and both humeri and marked curvatures in all the long bones. The child was extremely weak, and suffered from bronchitis. She exhibited evidence of neglect, and to all appearances, was near to death. Physically and mentally she would pass for a child three years of age.

The treatment was chiefly in the direction of proper nourishment and the administration of cod liver oil, phosphorus and iron. The site of the fracture of the left humerus gave trouble enough to demand the application of a splint; and a stomatitis required attention for a while.

Improvement was slow till her transfer to the Guild's Seaside Hospital, at Staten Island, early in July, when it proceeded very rapidly. During the entire summer she received the benefit of out-door air, either there or on the Floating Hospital. Since her return to the City Hospital in September, she has also improved steadily, and has recently passed through an attack of pertussis without any impairment of her general health. In

January she first began to walk. She is now intelligent and her mind active, though certainly not up to the average child of her age in this respect.

The father is a vigorous looking Italian, whose fourteen years' residence in this country has been long enough for him to forget much of his Italian, yet not long enough for him to learn English very well. In a mixture of Neapolitan and English, as the one or the other suited his convenience, he gave the family history, which was as follows:

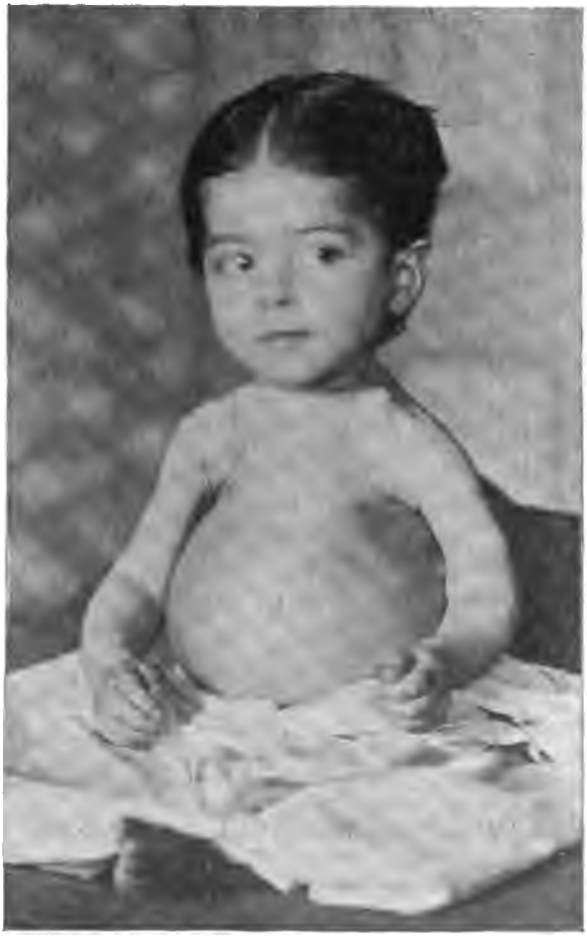


FIG. 1.—FRONT VIEW.—From photograph taken in April, 1894.

At the birth of the patient the father was thirty-six years old, and the mother a year younger. Both parents were born about fifty miles from Naples, in a country town where the father worked as a laborer till twenty-seven years old. He and his wife then emigrated to this country, bringing with them a son seven years old, and about twenty dollars. Six years after their arrival a boy was born, and two years later a girl. All three of these are healthy, and have exhibited no signs of rachitis apparent to the father. Yet the deformities of the patient at her birth, two years after the child last mentioned, must have been striking, for as the father put it, the baby was "all out of shape—e molto molle."

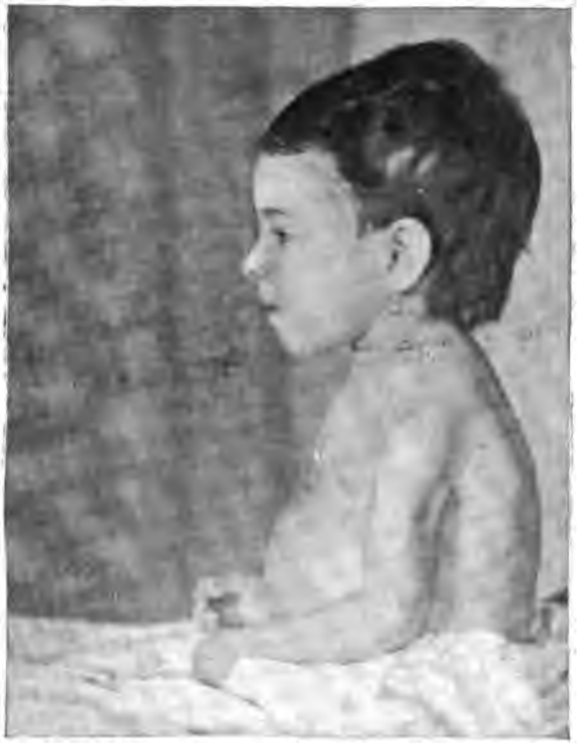


FIG. 2.—SIDE VIEW,—From photograph taken in April, 1894.

The subsequent history of the mother does not seem favorable for the interests of such a child, for within another two years the woman was again confined, delivered of a dead child, and died herself twenty-four hours afterwards. The immediate cause of death was hemorrhage, though there was probably some predisposing condition which questioning could not make clear. The man states that medical attendance was constant during confinement and till death, and that a consultation was also held. He says, moreover, that his wife was apparently strong and well up to this time—larger and stronger than he.

The family has lived in the thickly-settled tenement house district of New York since the arrival of the parents in this country. For the first six years on Crosby Street, where they occupied two rooms, which received sunshine only after four o'clock in the afternoon. For the last eight years they have lived on Thompson Street, where they had two rooms, into one of which the sun shone from eleven till one o'clock.

Since his arrival the father has worked as a laborer, but says that he has always had money to pay cash for all the family wanted in the way of food, and was worth $2,500 at the time of his wife's death. Further questioning will, I think, warrant the statement that the diet of the parents was fully up to the standard of their class.

Such a history does not seem to contain any peculiar features. It is the typical family history so often given in a case of acquired rickets among these people. There is no story of extreme poverty, neither could it be shown that the accumulation of their money involved much self-denial on the part of the parents.

The changes involved in the immigration of Italians to this climate and the new environment, must be factors in the production of the rachitic tendency of their children, yet their old habits are largely retained, and through summer and winter no portion of our New York population, either native or foreign, spend so little time in-doors as they—men,women and children. Their diet is a subject about which they often seem sensitive, and are apt to prevaricate. As a result of my opportunities for inquiry and observation, I believe that their food is perhaps increased in quantity, but that it gains little or nothing in quality in their new homes. This alone will account for rachitic tendencies.

It is far more difficult to account for the survival of a child, exhibiting at birth rachitic deformities so evident to the family, on the dietary which was furnished it. For their children do not receive full benefit of the household table, poor as it is. Meat is denied them under an imported idea that it will kill children, and the extent to which these New York Italians are accustomed to supply unwholesome material to their young children is not, I think, generally realized. Hunger is overcome with sweetmeats, maccaroni and fruit, the amount of the first increasing in a direct ratio to the family's ability to provide them. On admission to institutions the antipathy which these children, otherwise very tractable, have to proper food is noticeable and is sufficiently pronounced to constitute a national characteristic, while the nature of the articles for which they clamor tells plainly the story of their previous diet. As was the case with the child here reported, it is often necessary to teach them that milk and broths are to be eaten. Yet they soon get to like their new food, their rachitic conditions yield promptly to treatment, and they go on to an apparent cure, frequently only to suffer a relapse after returning to their homes.

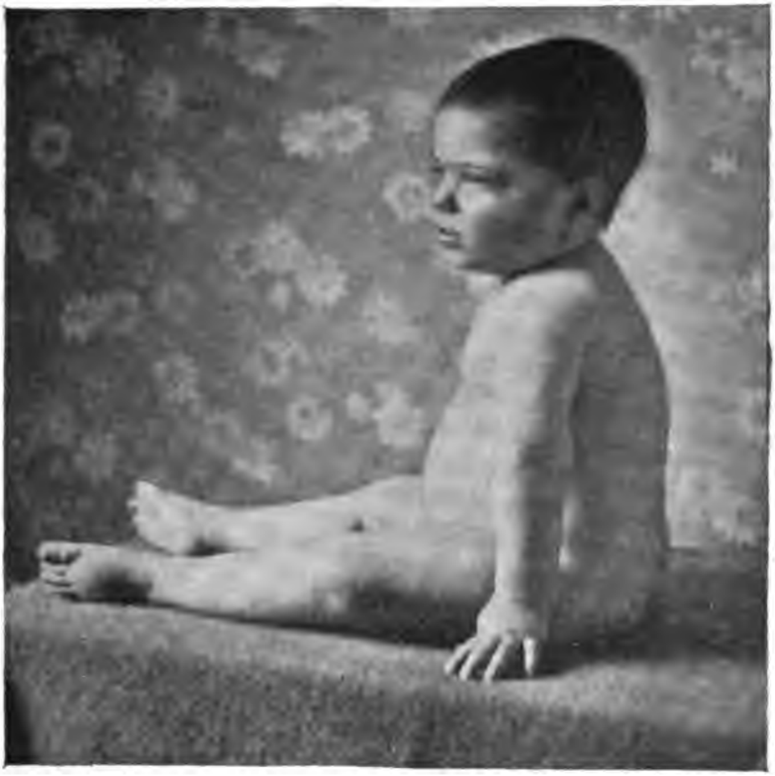


FIG. 3.--From photograph taken in May, 1895.

The Latest Hygienic Novelty in Paris is the use of porous glass for windows. This is declared to possess all the advantages of the ordinary window framing, and, while light is as freely admitted as through the medium of common glass, the "porous" glass also admits air, the minute holes with which this is intersected being too fine to permit of any draught, while they provide a healthy, continuous ventilation through the apartment.—*Popular Sc. News*, 1895, xxix, 114.

AN INSTRUCTIVE AUTOPSY.

By F. GORDON MORRILL, M.D.,
Visiting Physician, Children's Hospital, Boston.

THIS case is particularly interesting at the present time, when the question of the existence of a mixed form of pneumonia in children may be regarded as definitely settled in the affirmative by thorough bacteriological investigation. All observers, so far as I am aware, while their conclusions differ somewhat in detail, agree that the disease is frequently due to a mixed infection. In this instance not only was a mixed infection present, but the immediate cause and time of *mixing* were made clearly evident by the clinical facts, and corroborated in every respect by the result of a post-mortem examination.

C. S., æt two and one-half, entered the Children's Hospital with frank pneumonia of the upper portion of right lung early in January, 1895. She contracted diphtheria and was given an injection of antitoxin on the day when a sudden drop in her temperature announced the advent of convalescence from her lung trouble. Three days later the opposite lung was involved and the child died on Jan. 15th. The following are the important points demonstrated at the autopsy by Dr. F. B. Mallory:

Acute lobar pneumonia of the right upper and middle lobes, and two small, secondary abscesses at right apex. Numerous areas of broncho-pneumonia in right lower lobe.

Left upper lobe almost normal; left lower lobe moderately congested, and containing many solidified areas.

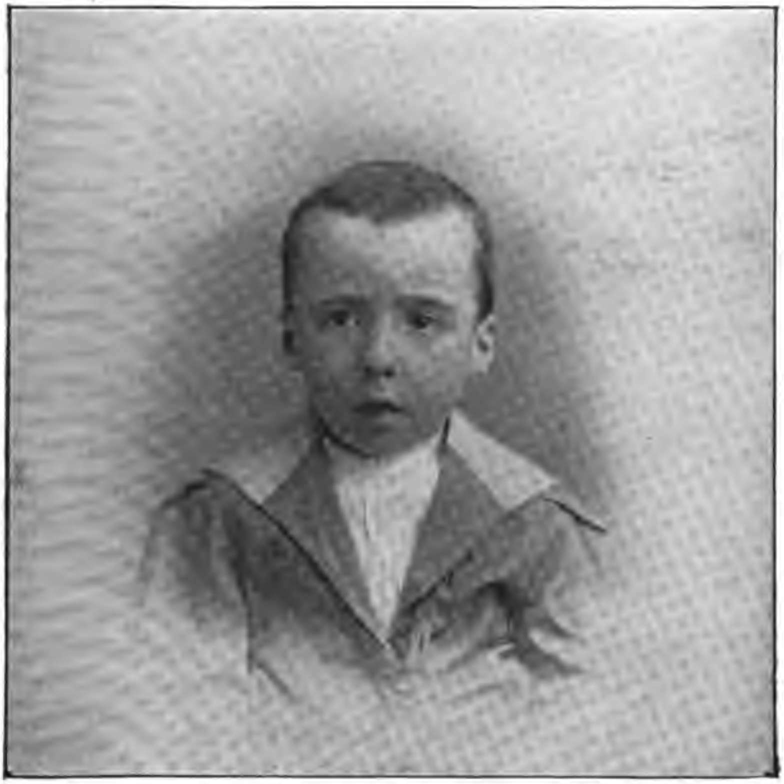
The bacteriological diagnosis was made by Dr. J. H. Wright, and is as follows: True diphtheria with streptococcus septicæmia, both the Klebs-Lœffler bacillus and streptococci being found in the lungs.

It would be difficult to imagine a stronger chain of evidence in favor of the occasional presence of "mixed" pneumonia in children.

Faith Healer's Death Certificate for a Diphtheria Victim. Mr. and Mrs. John Bennett's child died recently in Anderson, Ind. Dr. Wolman, a Christian Scientist, had been attending it. He made his death return yesterday. It was "Died from sin and fear."

The authorities made an investigation and found that the child had died of a mild case of diphtheria, which might have been cured with medical attention.

It was also found that the doctor and parents had relied on faith entirely, and the verdict also reads: "Death from criminal neglect." Warrants have been issued for the arrest of both the parents and the doctor.—*N. Y. Polyclinic*, 1895, vi, 352.



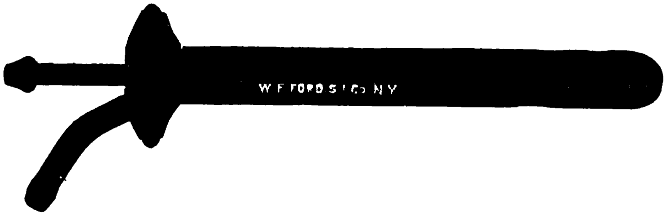
ADENOIDS OF THE VAULT OF THE PHARYNX.
(Episcopal Orphans' Asylum, New York.)

DOUBLE-CURRENT RECTAL IRRIGATORS FOR ADULTS AND INFANTS.

By ROBERT COLEMAN KEMP, M. D.,

Surgeon to the Church Infirmary and Dispensary, New York.

THE HARD RUBBER IRRIGATOR is a tube 5 inches long, with conical end, shape of a rectal bougie. It is closed throughout except at two points. On the upper surface just posterior to the tip, is an opening for the entering current to pass into the bowel. On the lower surface about half an inch posterior to this is a somewhat larger opening for the passage of the return current. The outer end of the tube is closed by a rubber cap which screws in place. This is perforated by a longitudinal tube, the outer end of which is furnished with a tip for the attachment of the tube of a fountain syringe. The inner end of this longitudinal tube screws into the tip of the main tube (within), and is arranged to conduct the entering current into the bowel through the upper opening. The return current passes through the lower opening through the lower part of the main tube, and down into the bed-pan through a short curved tube which is screwed into the lower part of the cap. This curved tube has an attachment for a soft rubber tube to carry off the outflow. The instrument is so made that the calibre of the return current is greater than that of the entering. The irrigator can readily be taken apart, cleansed and disinfected.



The Soft Rubber Irrigator (stiff), consists of a soft-rubber tube 5 inches long and which firmly grips a tip of hard rubber. This tip is partially hollow and has an opening above, which lies closely against the upper opening of the soft tube. A longitudinal hard rubber tube passes through the centre of the soft tube and screws into the hollow tip, and through this central tube the entering current passes into the tip and up into the bowel. There is an opening for the return current below, as in the other instrument; but the return current passes out on all sides of the central tube, so even if the sphincter contracts on the soft tube the escape will not be prevented. The outer cap is of hard rubber perforated for the longitudinal tube, and with the curved collecting tube as in the other instrument. This cap fits firmly against the soft tube. The soft tube can be replaced at trifling expense when worn out.

The Soft Rubber Irrigator (metal core), is similar in construction except that the central conducting tube is of copper. It can be bent to suit the operator.

The Soft Rubber Irrigator (flexible), is made on a similar principle. The outer tube is of soft rubber. The central conducting tube is of linen. This central tube is riveted into a hollow tip and has a lateral opening opposite a similar opening in the tip and outer soft tube. This tip screws into a thread (of hard rubber) at the end of the soft tube. The outer cap is the same as the other instruments, there being a washer, etc., to prevent leakage. To clean this instrument, the tip is unscrewed and the central tube withdrawn with it.

The Rectal Irrigators for Infants are similar in construction. In the stiff instruments, however, copper tubes—or silver or aluminum if desired—are substituted for the central hard rubber tubes, as the latter cannot be made of sufficient calibre in so small an instrument. This irrigator is also made with a linen central tube.

The Long Flexible Double Current Tubes for High Irrigation are made like the short flexible tubes, external tube soft rubber, internal tube of linen. They are twelve inches long for adults and eight inches long for infants. They can be ordered longer if desired. For general use, No. 1 and No. 2 hard rubber rectal and No. 2 soft rubber (stiff) rectal are the best in adults. These were used on the cases reported and fulfill most of the indications. It is possible to give a pretty high irrigation even with these short tubes.

Rectal Irrigators. For use in lower part of rectum semi-oblique (sitting) posture, with the openings just inside the sphincter. For higher up, the dorsal position or hips slightly elevated. The height of the current can be regulated by that of the douche bag and by checking the return current. At commencement of the irrigation the mucous membrane of the bowel will at times stop the openings in the tube, until there is a small amount of fluid in the bowel. Slightly turning the instrument, or pushing it in and then withdrawing it, will free it from this obstruction. In introducing the irrigator it should be well lubricated and inserted gently. To use the short irrigator for higher irrigation I insert it up to the cap. In the *Medical Record*, Dec. 7th, 1895, is a full report of cases. Briefly stated: They consist of (1) chronic cystitis, strictures, nocturnal irritability; (2) chronic colitis; (3) uremia, fecal accumulations in sigmoid flexure, suppression of urine; (4) retention of urine with spasm at neck of bladder; (5) colitis following typhoid fever; (6) ulcerations following Allingham's operation for hemorrhoids; and (7) enlarged prostate, acutely tender and frequent urination.

The use of the irrigator has also been suggested in rectal ulcers, jaundice, pelvic inflammation (post uterine), inflammation of uterus and adnexa, etc., as an adjunct to other methods of treatment.

BARLOW'S DISEASE IN A SEVEN WEEKS OLD BABE.

By ROSA ENGLEMANN, M.D.

Professor of Pediatrics in the Post Graduate School of Chicago.

FURST, in a recent exhaustive article, says: "The first symptoms of Barlow's Disease usually appear in the last third of the first year of life; they have not been observed earlier than the fourth month and later than the thirtieth month."

Although the record of my case is incomplete, and I could not follow it to its termination, I believe it should be published on account of the appearance of this disease in a seven weeks old infant; the earliest accredited case.

August 5th, 1895. The mother, poor, clean and healthy, brought me her seven weeks old son, Henry H., who had been sick about ten days. The father was young, healthy and strong. There was no evidence of syphilis or tuberculosis in either parent. This baby, the youngest of three children, one of whom was suffering with and later died of typhoid fever, was normally delivered. He took the breast well and regularly. There was no stomatitis, nor gingivitis. The stools and urine were normal in color, in amount and in reaction. No signs of rickets were observed. Its temperature per rectum was 103.6°. The mother's milk was not examined. She first noticed pain upon handling the arms, both of which finally became swollen, red and tender. When I first saw the child, the arms were reduced to the normal size, of ashen gray color and peeling in furfuraceous scales. No periosteal thickening could be demonstrated. The face was of an ashen color and had a most anxious expression. There was also ptosis and swelling of the left upper lid. The entire trunk had a bluish-red appearance that disappeared upon pressure. The buttocks were red, brawny and tender. The scrotum red but not swollen. The thighs were not involved. The right leg and foot were swollen to twice their normal size and presented a brawny, glazed, erysipelatous-like surface that ? pitted upon pressure.

The condition of the left leg and foot was much worse. To the above symptoms were added blueness and hemorrhages. The foot was covered with blebs and pustules and presented a gangrenous appearance.

August 7th, 1895: Splints and dressings wet with boric acid were applied. Liquor Ferri et Quin. Citrat, in Syr. Acid. Citric, was given. Cream, meat juice, lemon water and orange juice were added to the diet.

August 9th, 1895: Temperature 101° F. Right foot and leg entirely well but knee and thigh still slightly involved. Left foot and leg rapidly improving and returning both to normal size and color.

August 12th, 1895: Improvement of extremities continued but neck and both cheeks became red, hot and swollen. Left eye and forehead next were involved. The child now passed out of my observation. Upon my return to the city a month later, I learned that it had been found dead in bed by its mother's side, one morning during the last week in August.

HEMATOMA OF THE LABIUM MAJUS IN A CHILD.

By SAMUEL M. BRICKNER, A. M., M. D.,

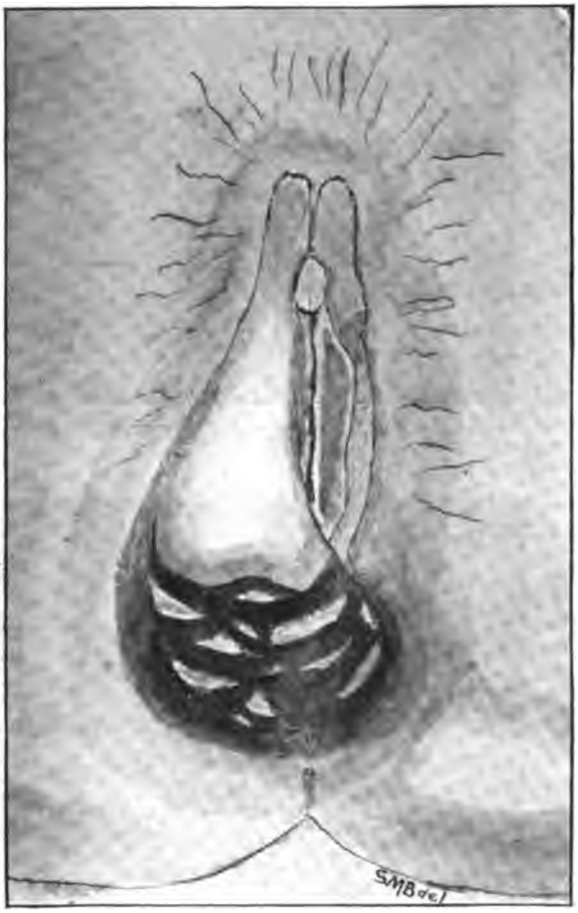
New York.

HEMATOMA of the labium majus although not uncommonly seen in parturient women, is rarely witnessed among children. On September 12th, 1895, I was called to see Annie W., a pubescent girl of 14 years of age, who, four days previously, had fallen astride the top of a chair. Immediately after the fall she noticed, in the genital region, a swelling "the size of a fist." Her mother made cold applications and the tumor diminished in size. As it continued very painful and as the child was unable to stand or to walk without considerable suffering, it was decided to send for a physician. I found a well-nourished but anemic girl, with normal temperature and pulse. On the right side of her genitals there was a pear-like tumor of considerable size. It was well-rounded, had a violet discoloration about its inferior portion and was elastic and painful to the touch. The swelling was in the right labium majus; the distention, going as high as the clitoris, obscured the right labium minus. It bulged toward the left at the posterior end of the vaginal outlet hiding the fourchette and the posterior terminations of the left labia.

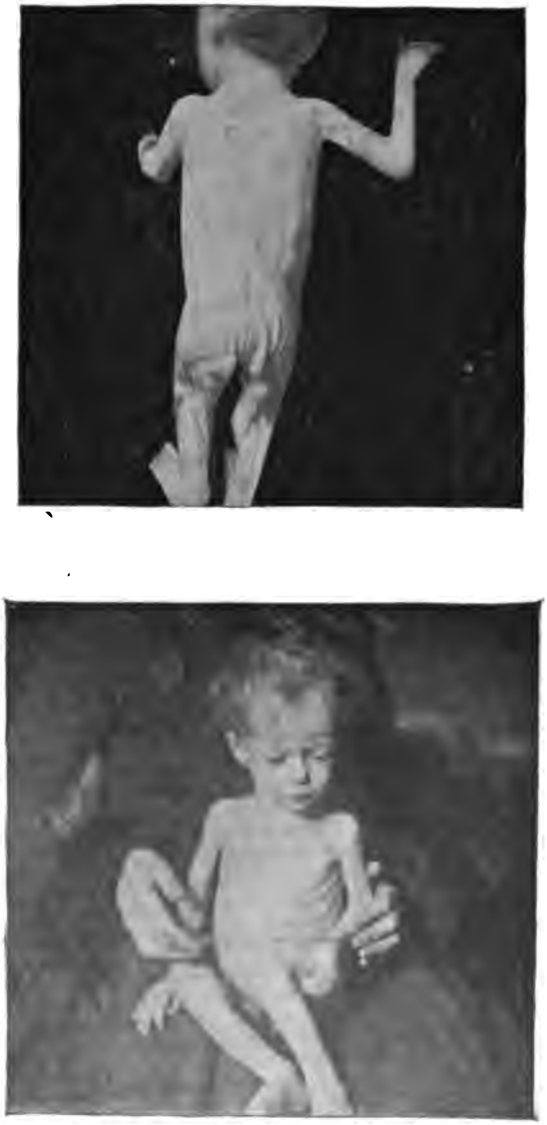
The diagnosis of hematoma was made and operation was decided upon because: a) of the extreme pain caused by the pressure of the contained clot; b) of the liability of the clot to become infected; c) of the long period of time absorption would require.

With the assistance of Drs. F. S. Mandlebaum and W. H. Luckett, the patient was put under chloroform anesthesia and the tumor was incised at its most inferior portion and about 75 grammes of clotted blood were evacuated. The cavity was irrigated and packed with iodoform gauze. The wound closed by granulation in nine days without rise of temperature and without the presence of any untoward symptoms.

Unless an hematoma is small—as it usually is in puerperal cases—I advise incision as soon as the diagnosis is established. It removes danger of infection and relieves the pain and discomfort attendant upon the pressure of the clot. Moreover, the time demanded for absorption of the exudate varies from two to six weeks. If the tumor be incised, the patient can walk about on the third or fourth day. Although the text-books declare incision an unnecessary procedure unless suppuration has already supervened, I consider this condition one deserving surgical interference.



Trusses. It has been discovered that trusses for hernia were known nine hundred years before Christ.-*Pract. Med.*, 1895, vi, 227



Dr. Brother's Case of Marasmus.

CASE OF MARASMUS DUE TO TUBERCULOSIS.

BY A. BROTHERS, M. D.
New York.

J. L., a female child, 18 months old. Parents were healthy. This baby was born normally and brought up at the breast until the age of 9 months. It was then put on the bottle and from this time it began to ail.

At the time of examination the child presented all the evidences of advanced tuberculosis with complete consolidation of the entire right lung. Several weeks later it died; no autopsy was permitted.

Was this case infected at the time of changing its breast milk for the bottle containing cow's milk?

The photographs show a most advanced stage of marasmus in which the subcutaneous connective tissue had almost entirely disappeared from the body.

PRACTICAL NOTES.

The Treatment of Epistaxis. Gillette says that in epistaxis the use of hydrogen dioxide with any suitable syringe, will be followed by very gratifying results. Use a teaspoonful or more of the remedy, in full strength, and the relief will be immediate. In operations in the nasal cavity, when bleeding obscures the vision, inject the hydrogen dioxide, ask the patient to blow the nose, and the field is clear again.—*Med. Journ.*, 1895, lxii., 695.

Phenazone in Whooping-cough. Dr. J. M. Taylor thinks that Phenazone is of great value in the treatment of pertussis. The average dose to a child is from half a grain to one grain every three hours. Formulæ employed are: *Phenazone*, one-half to one grain; *ammonium chloride*, two and a half to five grains; *syrup of lemon*, one-half fluid drachm and *Water* sufficient to make one fluid drachm: or, *phenazonc*, one-half to one grain; *Ammonium bromide*,one to two grains; *ammonium chloride*, five grains and *syrup* sufficient to make one fluid drachm. *Ipecac*, *squill*, *senega* or *tolu* may be added to the above prescriptions.

Meanwhile nutrition must be maintained with great care. This is best achieved with a carefully selected liquid and semisolid diet. Under such treatment the number of daily and nocturnal paroxysms always decreases.

Dr. McKee does not agree with those who think enormous doses of phenazone may be given safely to children. One patient of two years manifested somnolence, a tendency to syncopal attacks, and displayed blue extremities and an eruption upon the back. He was taking one grain of the drug every four hours. *Phila. Polyclinic*, 1895, iv, 501.

Local Anesthetics. In an editorial in the *Dental Headlight* we read: "The careless manner in which this drug (cocain) has been used by the medical profession can be attributed only to ignorance of its deadly character. It has been extolled until the public has come to believe that it is harmless, or nearly so. Almost every journal one reads contains someone's formula for a local anesthetic of which cocain is the basis, with which the originator can rob the operation of extraction entirely of pain, the claim based upon a few trials after a few weeks' use, and without specific directions as to the amount to be used,or making any allowance for differences of age, sex or constitutional susceptibility.

The knowledge of the agent gained by experiments on the lower order of animals at one time it was thought promised to establish it as safe and reliable; but when these experiments were repeated upon the human subject, they resulted frequently in the manifestation of the most alarming symptoms, and occasionally in death. The amount of cocain now used for the extraction of teeth, as compared to a few years past, except that employed by the professional tooth extractor, is almost none.

We must look for applications for the relief of pain among those agents possessing local anesthetic properties of known harmless character. Try the one given below: Do not allow the patient to swallow the mixture, as menthol when swallowed causes nausea.

℞ Menthol . . . . . gr. 160.
Tr. Myrrh . . . . m. 80.
Alcohol . . . . . . ℥ ij.

S. Thoroughly dry the gums and apply freely for a few minutes. Use more freely for a permanent than a deciduous tooth."—*Ohio Dental J.*, 1895, xv, 748.

The Treatment of Ingrowing Nail. Ingrowing nail, or *ongle incarne*, as the French call it, is, as is well known, a very painful affection, and unfortunately the operation necessary for its cure is often dreaded by the patients, although local and general anesthetics are employed to render the avulsion as painless as possible. A very simple method has been frequently employed by a *confrère* with constant success. It consists in painting the offending portion of the nail with a warmed 40 per cent. solution of caustic potash. In a few seconds the upper horny layer is rendered so soft that it can be easily removed by a piece of broken glass used as a scraper. The application of the solution and the scraping is continued until nothing but an exceedingly thin portion of the nail remains, which can be easily removed by a small scissors. The patient can now be considered cured, without having lost a drop of blood nor felt any pain.—*Med. Press and Circular.*—*Am. Druggist,* 1895, xxvii, 351

Antipyrin in Diseases of Children. Comby expressed before the French Medical Congress the opinion that antipyrin can be given to children as an antipyretic, an antispasmodic, an analgesic, and to check diarrhea. The drug is well borne by children of all ages and can be given in large doses. Only once in hundreds of cases has he seen a slight fugitive erythema caused by its administration. It has never in his experience caused disorder of the stomach or intestine, vomiting, or any ill effect on the kidney. In children suffering from febrile or spasmodic (chorea) diseases, antipyrin should not be given in fractional but in large doses to produce its full effect. According to the age of the patient 0.25, 0.50, or 1 gramme (4, 7¾, or 15½ grains) should be given at a time; this dose may be repeated two, three, five, and even six times a day. The same doses may be continued for weeks without ill effect. In chorea, antipyrin, as a rule, diminishes the violence and disorderliness of the movements and shortens the duration of the disease. In whooping-cough antipyrin has failed in the author's hands. In painful affections and in infantile hyperesthesia it is unreliable, but Comby admits that his experience on this point is not sufficient to base a final conclusion upon. In fevers antipyrin causes a notable reduction of temperature; it is one of the surest of antipyretics, and may be used without fear. When antipyrin in a sufficient dose does not lower the temperature it is a prognostic sign of ill omen. In the simple diarrhea of nurslings antipyrin is neither so powerful nor so sure in its effect as in febrile or spasmodic affections.—*Universal M. J.*, 1895, ix., 322.

Criminal Anthropology Applied to Pedagogy. Professor Lombroso (*The Monist*, October, 1895) in a lecture delivered before the teachers of Turin, expresses his conviction that the systematic study of the characteristics of school children, physical and mental, would bring about a genuine revolution in the prophylaxis of crime. He points out that the inclinations of the child are almost the same as of the adult rascal, but usually disappear as age advances. In some instances, however, these characteristics are conspicuous, and continue to be more and more prominent, and in these cases there are associated physical peculiarities and it is in the detection and pointing out of these possible criminals of the future that, Lombroso thinks, the teacher can do so much truly useful work.—*Glasgow M. J.* 1895, xliv, 466.

Removal of Blood Stains. The best way to remove blood stains says the *Centralblatt f. Gyn.*, is to soak the towels, etc., in warm water to which a teaspoonful of tartaric acid has been added. No soap is needed.—*Ohio Dental J.*, 1895, xv, 652.

Adenoids. Six cases of fatal hemorrhage are on record following the removal of adenoids from the vault.—*Pract. Med.*, 1895, vi, 237.

EDITORIAL.

RECENT PROGRESS IN GENITO-URINARY DISEASES.

1. **Hochsinger**, Congenital syphilis and tuberculosis. *Wien. Med. Blatter*, 1894, Nos. 20 and 21.
2. **Downie.** An account of some cases of acquired syphilis in children, *Lancet*, May 5th, 1894.
3. **King.** Bright's disease in children, *Medical News*, 1894, No. 16.
4. **Kohn.** Primary sarcoma of the kidney in a child nine months old, *Berlin. klin. Wochenschr*, 1894, No. 11.
5. **Hock.** Acute nephritis in a child three months old, which was affected with hereditary syphilis, *Wien. Med. Presse*, 1894, No. 44.
6. **Holt.** Acute pyelitis in infants. *New York Medical Record*, 1894, July 21st.
7. **Felsenthal & Bernhard.** On nephritis in affections of the large intestines in children, *Arch. für kinderheilk*, 1894. Bd. 17, 3 and 4.
8. **Steffen.** Chronic Cysto-pyelo-nephritis, *Jahrbuch, für kinderheilk*, 1894, Bd. 38. p. 384.
9. **Buscarlet.** Large Perinephritic phlegmon, resulting from traumatism in a child twenty months old, *Revue Med. Suisse romande*, 1894, No. 7.
10. **Reckman.** Data for a knowledge of cyclic albuminuria. *Jahrb. für kinderheilk*, 1894, Bd. 38, 2 and 3.
11. **Eschrich.** On cystitis in children, caused by Bact. coli commune, *Mittheil. d. Vereins d. Aerzte. in Steiermark*, 1894, No. 5.
12. **Brandt.** Sarcoma of the kidney in a child thirteen months old, *Norsk. Magaz. f. Lagevid. 4 Rakke, 9 Band.* p. 1, 1894.
13. **Schubbye.** Data upon sarcoma of the kidney in a child thirteen months old, *Ibidem.* p. 201.
14. **Earle & Weaver.** A case of sarcoma of the right supra-renal body, causing obstructive jaundice, *Journ. Am. Med. Assoc.* Dec. 29, 1894.
15. **Hansemann.** Adenomyxosarcoma of the kidneys, *Berl. klin Wochenschr*, 1894, No. 31, p. 717.
16. **Lueck.** Five cases of acute nephritis in children treated by pilocarpine, *Therapeutic Gazette*, 15, Nov. 1894.

17. **Le Gendre.** Albuminuria and nephritis in children, *Semaine Medicale*, Dec. 19, 1894.

18. **Carter.** Derangement of the kidneys in lithemia of children, *Journ. Am. Med. Assoc.* Nov. 24, 1894.

19. **Martin.** On the propagation of vulvo-vaginitis in children to the internal genital organs, and on peritonitis following the vulvo-vaginitis of little girls, *These de Paris*

20. **Semb.** Primary sarcoma of the kidney in a still-born child. *Centralbl. für Gynæcol*, Nov. 3, 1894.

21. **Steinmetz.** Primary tumor of the bladder in children. *Deutsche Zeitschrift für Chirurgie*, 1894, XXXIX, 3 and 4.

22. **Martin.** Congenital hydronephrosis in a child two years old. Operation; cure, *Revue de Chirurgie*, 1894, April 1894.

24. **Goerl.** Removal of a sarcoma of the right kidney in a child fifteen months old, *Centralbl. krankh. Harn und Sexualorgane*, 1894, No. 10.

23. **Sicchi.** Infantile gigantism with a tumor in the testicle. *Rivis. Speriment di freniat*, 1894, XXI., 1.

25. **Morrelli.** Litholapaxy in children. *Rivista clin. e terapeutica*, 1894, 2, p. 61.

26. **Roberts.** A case of lithotomy in a child affected with extrophy of the bladder which was partially closed and the creation of a urethra from the tissue from the scrotum, *Journ. Am. Med. Assoc.*, Jan. 19, 1895.

27. **Garnier.** Hereditary unsoundness of mind and acquired syphilis, *Bourgogne Med.* Dec. 1, 1894.

28. **Fisher.** Acquired syphilis in children, *Lancet*, Feb. 16, 1894.

29. **Fuelard.** Hereditary syphilis with cranial deformity and osteoperiostitis of the tibia, *Soc. franc. de dermatol*, March 14, 1894.

31. **Eudlitz.** Syphilis hereditaria tarda, *Ibidem*, Jan. 10, 1894.

30. **Eudlitz.** Acquired syphilis in early childhood, followed by infantilism, *Ibidem*, Jan. 10, 1894.

32. **Spillman and Etienne.** Syphilis hereditaria tarda, *Revue Med. de l'est*, Jan. 1, 1894.

33. **Graham.** A case of nephrectomy, for sarcoma of the kidney, *Jour. Am. Med. Assoc.*, April 20, 1895.

34. **Herveou and Lautier.** Upon a case of triple perforation of the urethra in a new born child, *Bull. soc. scien. de l'Quest*, 1894, No. 4, p. 234.

35. **Keegan.** Litholapaxy in children, *Lancet*, July 28, 1894.

36. **Doderlein and Birch-Hirschfeld.** Embryonic glandular tumor of the renal region in childhood, *Centralbl. für Harn. und Sexualorg*, 1894.

1. **Hochsinger** believes that a good many cases of so-called syphilis of the internal organs, are really tubercular. Especially does he believe this to be true in cases of cheesy infiltration of lung tissue, which he thinks is due to the two-fold infection of syphilis and tuberculosis.

2. **Downie** considers that acquired syphilis in children is much more common than is generally believed. In acquired syphilis he considers the secondary symptoms more severe and that the larynx is very frequently attacked.

3. **King** regards Bright's disease as an inflammatory disease, in the ordinary run of cases and, inasmuch as it is an inflammatory disease, certainly at some period of its stage, he regards that rest and non-stimulation are the proper methods of treatment. He looks upon the presence or absence of blood in the urine as an untrustworthy guide in the treatment. He therefore recommends that the cause should be removed by a vicarious discharge from somewhere else than from the kidneys, and suggests stimulation of the skin and bowels, recommending pilocarpine, liquor ammonii acetatis, or Dover's powder for the former; and croton oil, elaterium, jalap or Rochelle salts for the latter. He also speaks well of prolonged hot water or vapor baths. In cases of eclampsia, or where it seems imminent, he advises a resort to chloral hydrate, morphine or chloroform. It is only after the stage of renal engorgment is passed that he considers diuretics are indicated, and he divides these into three classes: (1) those which act by direct stimulation of the secreting structure of the kidney; (2) those which increase the amount of water in the blood vessels; (3) those which increase the general vascular tension.

4. **Kohn's** case occurred in a child nine months old in which a tumor of the right temporal region developed fifteen days before Kohn saw it. The tumor had grown steadily since its first appearance, and eight days later the right eye had bulged

out and the child was attacked with vomiting. Examination made before death showed exophthalmus of the right side and on the right temporal region there was a soft diffused swelling which was apparently seated on the skull. In front of the left ear were five isolated tumors the size of cherries. On the right side of the abdomen was a well marked, rounded tumor which, as well as the other swellings, had grown rapidly. The child died one month from the beginning of the disease. At the autopsy medullary sarcoma found in the right suprarenal capsule.

14. **Earle and Weaver** report the case of a child two years old which was attacked in February, 1893, with jaundice, dyspnea, edema, vomiting and discolored stools. This was associated with marked hypertrophy of the liver and distended gall bladder. All these symptoms alternated with periods of apparent good health. These conditions continued until April, 1893, when the child died. At the autopsy, the liver, spleen, kidneys, the gall bladder and portal vein were found compressed and the extra biliary ducts were almost obliterated by a sarcomatous infiltration of the right supra-renal capsule, which completely encircled the lower portion of the cystic duct.

15. **Hansemann** reports the autopsy of a boy, twenty months old, who had suffered from adenomyxosarcoma of the left kidney. The tumor, which was retro-peritoneal, was fairly movable, as large as a child's head, and extended from the diaphragm to the pelvis. The right kidney was increased in size and the renal capsule of that side was intact. The left supra-renal capsule was invisible and its vessels were lost in the tumor. The left kidney was pale, and lying behind and above the tumor. The left ureter was compressed, as was also the renal pelvis, the pyramids were flattened. The renal parenchyma, although compressed by and adherent to the tumor, was distinct from the swelling, which was circumscribed by an enveloping capsule. From the inner surface of this capsule, trabeculæ ran into the tumor, dividing it into spaces varying from the size of a bean to a nut. The liver was pale and contained small nodules of diseased tissue which, as well as the tumor, were found upon examination to be sarcomatous.

16. **Lueck,** in giving his experience of the treatment of acute nephritis in children by pilocarpine, states that the treatment

resolves itself into: (1) absolute rest in bed; (2) administration of pilocarpine and alkaline drugs; (3) aiding the action of the pilocarpine by the action of hot flaxseed and mustard poultices and supporting the action of the heart by proper remedies. After the urgent symptoms have been relieved, the patient must be treated according to the indications. For anemia, tincture of sesqui-chloride of iron must be administered in full doses.

18. **Carter** considers that investigation, properly directed, would undoubtedly show that the increase in the number of cases of Bright's disease, can be attributed in part, to the increase of the uric acid diathesis and lithemia among children and young people, caused by pastries, rich foods, confectionaries, sugars, etc., and he advises, in the treatment, three chief objects to be kept in view: (1) remove the acid digestion; (2) regulate the action of the liver; (3) relieve the kidneys of their extra work.

24. **Goerl** relates the case of a boy who, when apparently in good health in November, 1893, when eight months old, began to grow peevish and to lose interest in his playthings and surroundings. At this same time, the mother noticed that the right side of the child's abdomen felt harder than the left. The first physician who was consulted thought it was due to retained feces, as the child had been constipated for some weeks previously. The boy grew worse and lost flesh, but nothing could be seen until May, 1894, when a tumor was distinctly felt in the abdomen. The abdominal walls were bulged forward and the swelling was perceptible to the eye. Pain for the first time appeared, so much so that the child cried and it steadily lost strength and flesh to such a marked extent that it was unable to walk, a thing which it had previously been doing. The urine was not increased or diminished in quantity, but there was some blood. Upon examination, the boy was found to be well built for his age. In the median line of the right abdominal cavity a tumor was found, lying beneath the liver. Pressure now produced no pain. Palpation established it to be an elastic swelling, oval in shape, extending more laterally than upwards or downwards. The swelling was not effected by the respiratory movements of the diaphragm and it clearly sprang from the posterior wall of the abdomen. Notwithstand-

ing the negative condition of the urine, the diagnosis of malignant tumor of the kidney was made. On the 18th of July, 1894, when the child was sixteen months old, and the disease of eight months duration, the tumor was removed by Bergmann's incision through the abdominal parietes. The result was eminently successful, the child was restored to health, and in eight months after the operation was able to walk. Pathological examination showed the disease to be sarcomatous in nature.

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Yellow-Oxide-of-Mercury Ointment. Dr. George F. Suker, of Toledo, Ohio, writes (*Med. Journ.*, 1895, lxii, 735) as follows:

"This ointment, as we all know, is extensively used in ophthalmic practice. Yet it has one drawback, and that is this—it readily loses its therapeutical powers. Many of us have, no doubt, noticed that it acts admirably while fresh, but loses its efficiency on standing.

"Now, why is this? Dr. Holt (*Med. Week*) says that the deterioration is due to the light. He maintains that light decomposes the ointment. This is actually so. In view of this fact he recommends it to be dispensed in jars which are impervious to the rays of light. The lids of these not to be of celluloid, but of hard wood or metal; and an excipient should be employed that will not become rancid.

"Dr. Holt advises the following formula:

℞ Hydrarg. præcip. flav.......... 0.05—0.2 part;
Lanolin, } āā........... 3 parts:
Paraffin. liq. }
Aq. dest. sterilis............. 4 "
M., ft. ung.

"This formula is well worth trying, and if it is dispensed as above stated you will find it maintains its efficiency for any length of time."

Infantile Eczema. Dr. Cantrell says that the pustular variety is usually seen previous to the first year in life, while the vesicular lesion is encountered between that age and five years. In the treatment of this condition he applys a *bran bath*, followed by the use of one of the following ointments: When the part is highly inflamed, *boric acid*, *washed sulphur* or *calomel* in the proportion of twenty grains to the ounce of ointment base. When there is more infiltration than inflammation, *salicylic acid*, *salol* or *resorcin* may be used in strengths varying from twenty to sixty grains to an ounce of the base.—*Phil. Polyclinic*, 1895, iv, 487.

SOCIETY REPORTS.

SECTION ON PEDIATRICS, N. Y. ACADEMY OF MEDICINE

STATED MEETING, DEC. 12, 1895.

CRETINISM. Dr. J. H. Fruitnight presented a cretin, four years of age, who had been admitted to the St. John's Guild Free Hospital for Children last January. The parents were of foreign birth, and this child was the third in a family of four children. All the others were normal, and nothing unusual had been noticed about this particular child until it was about one year of age, when the parents observed that it continually protruded the tongue in a peculiar manner, and that its skin was of an unnatural hue. He had never made any attempt to creep, and could not yet say a single word. It had ten teeth altogether, but the upper ones were broken short near the gums, and the lower set was very poorly developed. The child is 25 inches long, the circumference of the head is 18¼ inches, and his weight was 16½ pounds at the time of admission to the hospital. It was noted also at this time that the skin was yellowish, dry and scaly, that the upper and lower extremities were curved outwardly, and that the spine exhibited lordosis. On October 2d, treatment with the dessicated thyroid extract was begun, and the extract was given in daily doses of from three to nine grains. There had been no unpleasant symptoms observed during this treatment; the temperature had not risen above 100° F. at any time, and for the most part had been about 99° F.; and there had been a remarkable improvement in both the physical and mental condition. By December 1st, the child had gained nearly a pound, and the thyroid extract was therefore continued in very small doses, and was given in conjunction with Fowler's solution.

Early Symptoms of Joint Disease. Dr. Le Roy W. Hubbard read a paper on this subject, confining his remarks to a consideration of tuberculosis of the synovial membrane, or of one or both bones of the joints. With early and appropriate treatment, he said the result was generally very satisfactory. When a case presented any symptoms pointing to joint disease, it should be the invariable rule for the physician to strip the patient and make a searching examination. If the symptoms were not sufficiently marked at the first visit, the case should be kept under observation for a time. The first and most important symptom of joint disease is reflex muscular spasm—*i. e.* a tonic spasm of all or some of the muscles in relation to a sensitive and diseased joint. It is the first sign to appear, and persists until healing has taken place. The spasm may be so intense as to give the impression that the joint is ankylosed. That it is a purely reflex spasm is shown by the motion of the joint becoming free under general anesthesia. Some experience is necessary to differentiate it from the voluntary resistance offered by the muscles of a frightened child. Neither traumatism nor heredity, in the opinion of the author, plays as great a part in the production of these chronic joint diseases as many suppose. When the history of traumatism is present, it will be observed that the symptoms of joint disease do not develope until several weeks afterward. In the early stage of joint disease the presence or absence of any one symptom is not sufficient to determine the true nature of the trouble; it is only by a careful grouping of the symptoms and signs that a correct diagnosis can be made.

Passing to the consideration of various forms of joint disease, the reader of the paper said that in Pott's disease of the spine the child is usually first noticed to carry the head stiffly or to one side. This twisting of the head has often led to a mistaken diagnosis of torticollis; but in spinal disease the chin is turned toward the contracted muscle; in wry-neck it is turned away from it. Many cases go on to marked deformity without any evidence of pain. In cervical spinal disease, the muscles passing up along the cervical spine will be found to be rigid, and attempts to produce extension, flexion and rotation will cause pain and spasm. In disease of the dorsal region, the child usually holds its shoulders stiffly, and there is apt to be pain referred to the epigastrium. This latter symptom is so constant that the dorsal spine should always be examined when such pain is a prominent symptom. This reflex pain has often led to the patient being persistently • treated for a dyspepsia that it never had. In disease of the lower part of the vertebral column, the child takes short steps and walks stiffly, and on attempting to stoop and pick up something from the floor it holds the body rigidly, and bends at the hips and knees. On attempting to hyperextend the spine, the examiner will elicit reflex muscular spasm. On attempting to extend the thighs there will be spasm and more or less resistance on one side, due to irritation of the psoas muscle.

In hip joint disease, the first symptom in the vast majority of cases is a limp, and this is generally worse in the morning. It frequently disappears for a time, and then returns. The next most frequent symptom is pain, which may be either at the hip or the knee. By carefully contrasting the motions of the two hip joints it is not difficult to detect the restriction of the motions in the affected joint. Regarding the confounding of the psoas contraction of Pott's disease with the limitation of motion at the hip occurring in hip joint disease, the reader of the paper said that in Pott's disease rotation, abduction, adduction and flexion were not limited on attempting to extend the thigh, whereas in hip joint disease they were restricted. In speaking of methods of examination, Dr. Hubbard said he wished especially to deprecate all rough handling of the joint, and particularly pounding on the heel, or similar methods of trying the effect of concussion on the joint.

In disease of the knee joint, if the morbid process began as a synovitis, there was no pain, and only a slight limp after walking, and the motion of the joint was nearly normal. If the disease, however, began in one of the bones of the articulation, there would be a more pronounced limp, worse after rest, together with pain, spasm and limitation of motion. Flexion usually occurs quite early, and is accompanied by atrophy of the thigh and leg. If no appropriate treatment be adopted, chronic synovitis almost always extends to the bones.

In disease of the ankle, a puffiness about this joint was often the first sign noticed, then there would be limp, reflex spasm and inversion.

Dr. W. R. Townsend, in discussing this paper, said that many errors in diagnosis of joint diseases arose from a neglect to compare the two sides of the body. In recognizing reflex muscular spasm, the most important point to remember was that if the resistance was voluntary, it would gradually yield under steady pressure, but if it were a true spasm of muscle, this would not occur even when considerable force was applied. In the early stage of Pott's disease there was often a lateral deviation of the spine, which sometimes caused physicians to entirely overlook the true underlying condition.

Relaxed Ligaments. Dr. V. P. Gibney presented some informal notes and remarks on relaxation of various ligaments of the body, and exhibited a number of patients illustrating various phases of this condition. In connection with the first patient presented, a little girl under three years of age, with relaxed ligaments of the hip and a congenital dislocation of the hip, Dr. Gibney called attention to the splint that he was using for overcoming the dislocation. It consisted of a rigid perineal crutch without the encircling band of the Thomas splint, and with a rack and pinion for making extension. He had used this splint in several private cases, and had found that it acted admirably in reducing a certain amount of the deformity. Other cases were shown to illustrate relaxation of the ligaments of the hip and knee. Among the latter class were one or two in whom the relaxation had followed operation for the relief of knock-knee.

Dr. Gibney said that he found that the ligaments of the spinal column played an unimportant part in the production of the deformities of this region, and that the maintainance of the integrity of the hip joint was due to bony support as well as to the powerful ligaments here. In cases of knock-knee, it was found that the stretching of the internal lateral ligament and the shortening of the external lateral ligament by contracture were followed by elongation of the condyle and head of the tibia as a result of the removal of the normal pressure. Division of the ligaments had accordingly but little effect in bringing about a cure. Relaxation of ligaments was most often seen in connection with hip joint disease, and was due to the two common practice of making extension by adhesive plaster strips attached only to the leg, instead of by straps attached to both the leg and thigh. Relaxation of the ligaments of the ankle joint was seen in flat-foot and as a consequence of poliomyelitis.

Dr. R. H. Sayre said that in his opinion relaxation of the ligaments in rachitic children, was an important factor in knock-knee and flat-foot. He had seen but a few cases of *genu recurvatum*, but he recalled one such case in which when the child kicked, its foot would strike the belly. About the only useful treatment for relaxation of ligaments was the use of proper supporting braces. He asked for Dr. Gibney's experience with alcohol injections in the treatment of cases of relaxation of the ligaments at the sternal end of the clavicle.

Dr. Townsend recalled two cases in which a good result had been secured in this class of cases by the injection of alcohol.

Dr. Gibney said that he had had an unfortunate experience with these alcohol injections, as in one instance they had produced suppuration. He knew of no efficient method of treating this most distressing condition.

Microbes on Fruit. Fruit skins of all kinds are full of germs, The bloom of the peach is a luxurious growth of microbes, that of grape only less so; and when these skins are taken into the stomach they may find more favorable conditions for their lively and rapid development. This is the reason many persons think they cannot eat raw fruit. If they would in all cases discard the skin they could derive only good from the fruit itself. Nature provides the skin for the protection of the fruit from the multitude of germs which are ever ready to attack it, as is evidenced when the skin is bruised or broken in any way. The microbes at once begin their work of decay and the fruit is unfit for food. Children are chief offenders in respect to this rule and should be carefully watched and frequently cautioned. A daintiness as to the condition of fruit should also be cultivated, to prevent its being eaten unripe, or too old, on the verge of decay. Remember that it is sweet and ripe fruit in prime condition only, that is the healthiest.—*Popular Sc. News*, 1895, xxix, 118.

Purpura. In the treatment of simple *purpura*, Dr. Cantrell finds that the *oil of turpentine* in five minim doses, three times a day, gives more relief than the ergot preparations. Usually a cure results in a few weeks if there are no complications.—*Phila. Polyclin.*, 1895, iv, 156.

BOOK REVIEWS.

Epidemic Ophthalmia, its Symptoms, Diagnosis, and Management; with Papers upon Allied Subjects. By Sidney Stephenson, M. B., F. R. C. S., *Surgeon to the Ophthalmic School, Hanwell, W.* (Edinburgh & London: Young J. Pentland. 1895.)

THIS handsome volume deals with a subject that is of interest to all who have to do with schools—namely, epidemic ophthalmia. As Mr. Stephenson remarks in the preface, that ailment "has worked havoc in many of our parochial institutions, and thousands of pounds have from time to time been expended in order to stay its ravages and to stamp it out of existence. But, for all that, this preventable disease has not hitherto been prevented." The truth of his statement will be disputed by nobody who is at all conversant with the recent outbreaks that have occurred in not a few of the English educational establishments, both of high and low class.

The book takes its title from the first section, which is devoted to a description of epidemic ophthalmia, its symptoms, diagnosis, and management. After discussing acute trachoma, and the muco-purulent, the purulent, and the diphtheritic forms of ophthalmia, the author gives an account of the ways of distinguishing those different kinds of disease. He lays great stress upon bacteriological examination of the secretion, and his remarks are illustrated by an excellent plate showing the various kinds of micro-organisms that may be met with. He next discusses the various ways by which the ailment is spread, and expresses his belief "that ophthalmia is propagated mainly, if not exclusively, by actual contact." He is sceptical as to its aërial dissemination. He concludes this part of the subject by describing minutely the methods which have been found most serviceable by him and by others in ridding an institution of the pest. This essay is thoroughly practical in tone. It embodies a large amount of experience.

The second paper is devoted to the follicular granulation of the conjunctiva. Readers need hardly be reminded of the doubts and obscurities that have up to now surrounded this subject. In order to ascertain the significance of this peculiar conjunctival growth, Mr. Stephenson examined the eyes of nearly 15,000 presumably healthy children belonging to various social grades, and found that it was present in upwards of 93% of those inspected. From this and other facts he concludes that the follicular granulation is present, to an extent that varies with the individual, in almost all persons under twenty years of age; that it does not constitute an early stage of trachoma; and that it is not the direct outcome of an unhealthy environment. In short, he regards it as comparable with the follicular projection of the pharynx, and an evidence of what he terms the "adenoid activity" of young subjects.

The third paper describes the treatment of trachoma and of its complications, such as pannus, ulcers of the cornea, and trichiasis. As to the respective claims of surgical and escharotic methods, Mr. Stephenson's words are worth quoting. He says,—"It may be as well to state clearly that I am in no sense an advocate for surgical interference in the common run of cases. Broadly speaking, I should say that quite 75% of the patients recover under the ordinary treatment by escharotics. Those who decry the use of such agents appear to do so without valid reason. The method is certainly tedious, but success can always be obtained, provided the applications are made with sufficient frequency and in an efficient way. In the remaining 25% of cases, however, the course of the disease may be shortened and its severity reduced by a timely resort to surgical measures. To reject operation entirely is, in my opinion, as unscientific as to fly to it on every occasion." We are inclined to think that most practical surgeons will endorse Mr. Stephenson's words.

A short paper on the treatment of follicular conjunctivitis concludes this part of the book.

There is a useful appendix dealing with lavatory arrangements. The contrivances—mechanical and otherwise—that have been found of service in preventing the passage of ophthalmia by water and towels are fully described. Illustrations are given of the spray baths in use at the Ophthalmic School and elsewhere.

Epidemic Ophthalmia is an eminently readable book. It covers ground that is scarcely touched upon in ordinary ophthalmological manuals. It should, in our opinion, find a place upon the book-shelf of everybody who is interested in schools and their management.

George Carpenter. M.D., London.

Medical and Surgical Report of the Children's Hospital, 1869–1894. Edited by T. M. Rotch, M.D., and Herbert L. Burrell, M.D. (1895. Published by the Board of Managers, Boston, Mass. 367 pages. 98 illustrations.)

THIS report is beautifully printed on heavy plate paper, and, besides its historical interest, is a valuable contribution to pediatrics. It consists of three divisions—the administrative, the medical and the surgical. The administrative division contains the history of the hospital, a description of the buildings, an account of the executive management, a description of the Convalescent Home at Wellesley, Mass., and an account of the out-door relief department of the hospital.

The medical division consists of a series of original papers by members of the staff. The surgical division consists of three parts. Part I—A description of the work done in the surgical wards of the hospital, in the surgical out-patient department and in the surgical appliance shop. Part II—A description of the standard routine of procedure in the classes of cases treated at the hospital. The treatment of the most common diseases are reported in detail in preference to recording unique or rare affections. Part III—Original surgical papers on subjects selected by members of the staff.

The original articles of this report will appear in the next issues of PEDIATRICS as abstracts. All of them are interesting, and many of great value.

The surgical work of the hospital is divided between two services, and each service is under the charge of the same surgeon throughout the year, who has superintendence of both the in-and out-patient departments of his service. This is for the purpose of securing a uniform system of treatment—a great advantage in the management of chronic cases. In fact, the hospital is a model in every way—the management of contagious cases, the arrangements for the operating rooms, the preparation of instruments, dressings, brushes, sheets, gowns, etc., of the patients and of the hands of the surgeons and the assistants, and finally the surgical appliance shop, with its opportunities for experimental work with new apparatus. Every one who is interested in hospital work will find this report invaluable.

Pregnancy, Labor and the Puerperal State. By Egbert H. Grandin, M.D., *Consulting Obstetric Surgeon to the New York Maternity Hospital, etc.*, and **George W. Jarman,** *M.D., Obstetric Surgeon to the N. Y. Maternity Hospital, etc.* (1895, The F. A. Davis Co., Phil. 261 pages. Illustrated with 41 photographic plates.)

THE present work aims at being a guide to practice and is clinical in its teaching. It is direct in its statements whenever the facts warrant such directness, and anatomical, embryological and pathological data are only inserted when essential.

Chapter IV. is devoted to the care of the new-born infant, and is an excellent and practical article. Great stress is laid on the early and careful cleansing of the eyes. The eyelids are wiped off with a piece of sterile gauze or cotton saturated with a 50 per cent. solution of boric acid, and then the lids are opened and the conjunctival surface is carefully irrigated with the same solution. In the event of there being any suspicion of gonorrheal infection, Credé's method of instillation of silver-nitrate solution (two drops of 2% solution) is advised. However, we can not agree with the writers when they characterize the routine adoption of Credé's method as little short of barbarous. It certainly does no harm, and it is a common experience to find gonorrhea where least expected.

When greasing the child, previous to bathing it, care should be taken to protect the eyes and the stump of the cord, since the oil or vaseline is not sterile. A dry dressing of sterile absorbent cotton or gauze should be wound around the cord and left in place until the cord drops, as it is desired to have it undergo a dry gangrene after an aseptic fashion.

Attention is called to the value of antipyrin applied in powdered form as a hemostatic for oozing from the cord, the harm resulting from too much clothing and from overfeeding, and the importance of keeping the mouth well washed out and giving the child an abundant supply of water to drink.

After calling attention to the special care demanded by premature infants, they take up a consideration of asphyxia and the different methods of artificial respiration. Preference is given to the Schultz and Byrd-Dew methods, and excellent plates showing the technique are presented. One or the other of these methods, associated with mouth to mouth insufflation, will result in the resuscitation of the majority of infants who are suffering from the effects of the venous form of asphyxia. The Marshal-Hall or the Sylvester method has no advantage over the others; and Laborde's rhythmic traction of the tongue has been of doubtful value in their experience. In the anemic type of asphyxia, in addition to the artificial respiration, measures to relieve shock should be employed, namely, heat to the surface, hot saline injections into the rectum, ten drops or more of brandy into the mouth, etc.

The press work is well done and the illustrations are original, and taken from cases in practice. The book is a valuable and practical addition to our knowledge of the subject, as it is based upon the personal experience of the writers.

Fatal Retropharyngeal Abscess. PLATOT and VARIOT (*Jour. de clin. et de ther. infantile*, July 11, 1895) note a case of retropharyngeal abscess, in an infant of 14 months, in which death occurred suddenly at the moment of incision. The fatal result was not due to the invasion of the air-passages by the pus, and could only be explained by a reflex syncope.—*Univer. M. J.*, 1895, ix, 311.

Diarrhea in Infants.—℞ Benzonaphthol.
Bismuth subnitr.
Resorcin, āā gr. jss.

M Sig.: For a child one or two years of age one such powder every two hours until six have been taken.—*Pract. Med.* 1895, vi, 230.

ABSTRACTS.

THE MEDICINE OF PRIMITIVE PEOPLES.

Kober, in a review of Dr. Max Bartel's Work discusses various primitive methods that are of interest to the pediatrist (*Va.M. Month.*, 1895, xxii, 913) *Circumcision*, and other ritual operations, are frequently practiced by the primitive races. The natives of Northern and Central Africa and the Mohammedans of Asia employ a razor, the ancient Hebrews used a flint knife, and the inhabitants of the Malayan Archipelago resort to a sharp piece of bamboo: some employ the circular method, while others, like the Serang Islanders, simply split the prepuce; for this purpose the operator, usually an older man, stretches the prepuce over a piece of wood, places the knife longitudinally over it, and drives it home by means of a solid block of wood: hemorrhage is controlled by tamponade and the application of styptic powders.

The girls of the Malayan Islands are subjected to a *slight excision of the præputium clitoridis*, the operation being performed by women. In East Africa, a portion of the mons veneris and the labia majora are excised usually with a dirty razor. By means of suitable position and fixing the thighs, or the introduction of a few stitches, union of the vulva is effected; the insertion of a small tube prevents complete closure and admits of the escape of urine and menstrual fluid. This operation has been styled infibulation. Before marriage, the old union is partly divided, and just before parturition the opening is still further enlarged, while, after recovery from confinement, the operation of closing the vulva is frequently repeated.

Dental operations are fully attended to; they often use files and chisels, but do not hesitate to resort to the hammer and brute force for the removal of teeth. The people of Sokoto, however, have an instrument closely resembling the modern gum-lancet, and very fair shaped forceps.

Snake Bite. He saw an Indian girl who had been bitten by a rattle snake; the arm was enormously swollen, and the child showed profound constitutional symptoms, and would probably have perished if her father had not applied a buckskin ligature above the elbow. The wound in the thumb had been freely sucked and the entire arm covered with a poultice of chopped fresh lupine.

Hernia is also rarely referred to although it is well known that the umbilical variety is quite common, especially among the tribes of Africa. Moore saw a medicine-man at Radschputana apply a hot iron over an injured hernia, thus proving his ignorance of the nature of the case; a native of the Loyalty Island operated upon himself for a femoral hernia, but perished in consequence. Schoolcraft says that our Indian tribes are perfectly at sea in the treatment of strangulated hernia, while in the reducible form they employ very suitable bandages. Quedenfeldt's collection of trusses from Morocco shows that they treated their cases quite intelligently.

According to v. Miklucho-Maclay, a peculiar operation, called "Mika," and "Kulpi," is practiced on boys at the ageof twelve and fourteen, among the Diegerrie tribe, residing along Cooper's Creek, in Australia, consisting in a *complete splitting of the urethra along the lower surface of the penis* from the orifice to the scrotum. According to Taplin, the operation is performed as follows: A suitable piece of kangaroo bone is introduced into the urethra as far as the junction of the scrotum, and using this as a guide, the operation is completed by means of a flint knife or shell fragment; sometimes the incision is made without a guide, the penis being placed on a piece of tree bark. After the operation, a piece of soft bark or a piece of bone is inserted to prevent adhesion of the wound surfaces. Of the effects of the operation, we are told that the urethra is no longer a canal, but a shallow groove, with the outlet close to the scrotum, and they have to urinate in a feminine fashion. During a relaxed condition, the penis is very much shrunken, and has the appearance of a large button, while during an erection, it is broad and flat, and in coitus the spermatic fluid is ejaculated outside of the vagina. The motive for this mutilation is stated by the natives to be a limitation of the offsprings, while others simply declare it to be the custom of their ancestors, and they follow it. The women of Nasim confirm the statement that men thus operated upon cannot beget children. It is a noteworthy fact that the finest specimen of manhood in some tribes are spared from this mutilation; but among the Nasims, the custom appears to be reversed, as only the more promising types are selected as a mark of special distinction for this operation; and the Reporter adds, that they are special favorites among the women.

THE MODIFIED MILK QUESTION.

Worcester (*Bost. M. and S. J.*, 1895, cxxxiii, 287 *and Am. M. S. Bulletin,* 1895, viii, 1404) has recently been privileged to study the Dresden methods of modifying milk. The superiority of the Dresden modification rests mainly upon the recognition of an essential difference between casein and lact-albumin. Prof. Lehmann's analyses (published posthumously) of breast milk and cows' milk show that while cows' milk is more than twice as rich in casein, it is much poorer than human milk in lact-albumin.

	Cows' Milk Per ct.	Human Milk Per ct.
Casein	3.0	1.2
Albumin	0.3	0.5
Fat	3.5	3.8
Sugar	4.5	6.0
Ash	0.7	0.2
Water	88.0	88.5

Dilution of cows' milk, with sufficient water to reduce the casein of the mixture to the amount found in human milk, results in a mixture containing only one-third enough lact-albumin. If the milk be also sterilized, still further loss occurs, as the coagulated albumin is wasted in the scum, and by clinging to the sides of the bottle. He asks whether this may not account for some of the failures with sterilized milk.

We dread the appearance of curds in the stools as showing that the casein is not digested, but do we not often by diluting starve the child of the necessary form of soluble albumin? Three forms of soluble albumin are available: peptonized grain albumin, meat juice, and the white of egg. The last is undoubtedly the best, because of its closest resemblance to lact-albumin and its easiest obtainment.

The following rule is given for imitating breast-milk: To 1 pint of cows' milk (of 9½ per cent. fat) add 1½ pint of an emulsion of one egg-white and 13 dr. of milk-sugar in water. To make the latter, use a fresh egg, which has been washed and rinsed in absolute alcohol. Drop the white only into a clean bowl and add clean or sterilized milk-sugar; rub together, avoid making foam, and then gradually pour in the water. This is then filtered through a sterilized cloth and mixed with sterilized milk and placed in bottles stoppered with sterilized cotton. Such a preparation of milk should, in the author's opinion, go far toward preventing scurvy, which frequently arises with the use of sterilized milk.

Dr Worcester's otherwise excellent paper is, however, marred by two things: first, a violent attack upon the Walker-Gordon modified milk because it is produced under patents; second, by his failure to give instructions for obtaining a milk of even approximately "9½ per cent. fat." General observations are made upon the use of the lactometer for this purpose, but the new method of preparing milk would have been better introduced to the busy general practitioner, had further instructions been added upon this point.

CYANOTIC SYMPTOMS AFTER LOCAL APPLICATION OF ACETANILID.

Dr. Charles Sauter (*Louisville M. M.*, 1895, ii. 341) reports the case of a child, three years old, with eczema of the neck, for which he prescribed a dusting powder composed of one part acetanilid and three parts subnitrate of bismuth.

The eruption improved, but a second application of a new supply of the powder produced alarming cyanosis—the child became blue, and the breathing labored; similar symptoms, although not so alarming, had followed every application of the powder.

The use of acetanilid locally has been much advocated of late, and most happy results attributed to it. Therefore this case was reported as a warning for others to be careful in its use.

SOME REMARKS ON ANESTHESIA FROM ETHER AND CHLOROFORM.

Brickner (*Med. News*, 1895) contends that for general use, ether is a safer narcotic than chloroform. He urges that more care and greater consideration be given to the administration of anesthetics in hospitals. Following the investigations of Kemdrat and Kolisko, he points out the danger of chloroform in cases where adenoid vegetations or other marks of the *habitus lymphaticus* exist. The writer commends the preliminary use of cocaine in the nostrils before anesthesia by ether or chloroform and has had gratifying results from the rhythmic traction of the tongue as described by Laborde.

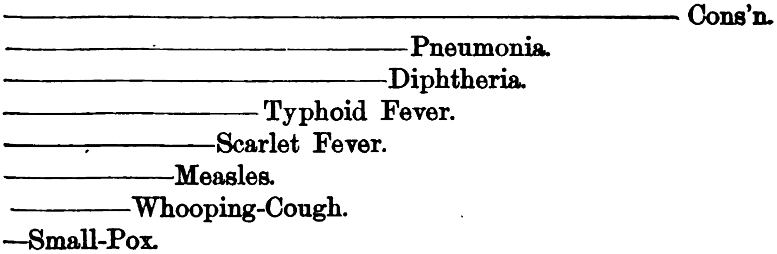
DANGEROUS COMMUNICABLE DISEASES.

HOW SPREAD, HOW RESTRICTED AND PREVENTED.*

In Michigan the most dangerous communicable diseases, named in the order of their importance as causes of death, are consumption, pneumonia, influenza,† diphtheria, typhoid fever, scarlet fever, measles, whooping-cough and small-pox.

The relative importance of these diseases is shown by the diagram below. Consumption causes many more deaths than does any other disease.

DEATHS IN MICHIGAN, TEN YEARS, (1884–93.)



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* Data and statements supplied to school superintendents and teachers, by the Michigan State Board of Health, in compliance with Act No. 146, Laws of 1895.

Section 1 of this act requires "That there shall be taught in every year in every public school in Michigan the principal modes by which each of the dangerous communicable diseases is spread, and the best methods for the restriction and prevention of each such disease. The State Board of Health shall annually send to the public school superintendents and teachers throughout this State printed data and statements which shall enable them to comply with this act. School boards are hereby required to direct such superintendents and teachers to give oral and blackboard instruction, using the data and statements supplied by the State Board of Health." (Section 2 provides penalties for noncompliance.)

† Up to the year 1889 influenza caused few deaths in Michigan; but in 1890, 1891, and 1892 the deaths reported from it averaged over 1000 a year.

PRINCIPAL MODES BY WHICH THE COMMUNICABLE DISEASES ARE SPREAD.

Most of the so-called "contagious" diseases are usually spread by means of atmospheric dust of which the germs of these diseases sometimes constitute a part. Consumption, diphtheria, pneumonia, influenza, scarlet fever, measles, whooping-cough, and small-pox are usually spread in this manner. Probably these diseases are not usually caught or contracted except through some break in the skin or in the mucous membrane lining some cavity. Such breaks or ulcerations occur not infrequently in the throat at those seasons of the year when the atmosphere is what is known as "raw"—that is, when it contains the throat irritant ozone, and when it is irritating by reason of its drying effect in cold, windy weather. These diseases are apparently usually contracted by taking in the germs with the breath, through the mouth, and probably sometimes through the nose. The nose is so constructed, and so guarded by minute hairs, kept moist by the exhaled breath and by secretions, that very little dust of any kind is permitted to pass beyond the nose, so long as that organ is in its normal condition; but so much dust-laden air passes through the nose that much dust is there collected. Generally such dust contains many species of bacteria, spores, and germs, some of which are capable of causing a specific disease. For instance, the micro-organisms (pus cocci), which cause suppuration (the formation of pus), are so generally present that any break in the skin or mucous membrane is usually followed by the formation of pus. The germs of pneumonia are quite generally distributed, so that they are sometimes found present in the noses and mouths of persons not yet suffering from pneumonia.

Because of these facts, handkerchiefs once used are very liable to spread disease, in case any secretion from the nose has dried on so that it may be detached and form dust that may be taken in with the breath or enter any break in the skin.

SOME OF THE CHIEF SOURCES OF DANGER OF CONTRACTING DISEASES ARE:

1. Dust from infected handkerchiefs. (A general rule applicable to all persons, sick and well, is that handkerchiefs should be looked upon with suspicion. They should not be used after any secretion from the nose has been permitted to dry upon them. After being used they should be put into a paper bag which may then have its top twisted shut, there to remain until put into boiling water).
2. Dust from floors or articles upon which infected sputum or saliva has been ejected.
3. Contact with the hands of persons who cough into their hands, or who handle infected handkerchiefs or cloths into which they have spit.

4. Books, pencils, gum, drinking-cups, etc., used in common.
5. Dust from rooms or clothing infected by persons having a communicable disease.
6. Possibly typhoid fever may be spread by means of dust containing the germs of that disease; but in order that typhoid fever may occur, the germs must be swallowed or find their way to the lower part of the small intestine. This disease is usually spread by drinking-water which has been contaminated with sewage or with leachings from privies. Similar statements are true relative to cholera.

DANGEROUS COMMUNICABLE DISEASES, IN THE ORDER OF THEIR IMPORTANCE, MODES BY WHICH THEY ARE SPREAD, AND BEST METHODS FOR THEIR RESTRICTION AND PREVENTION.

Consumption is now known to be a communicable disease. It is spread by the dust of dried sputa, and also by milk and meat of tuberculous animals. The most important measure for the restriction of consumption is the disinfection or destruction of all sputa of every consumptive person.

It is best that all persons who have a cough should carry small pieces of cloth (each just large enough to properly receive one sputum) and paraffined paper envelopes or wrappers in which the cloth, as soon as once used, may be put and securely enclosed, and with its envelope, burned on the first opportunity.

Pneumonia is spread by a germ which is in the sputum of those who have the disease (and of some who do not have the disease, unless, possibly, after exposure to the inhalation of cold air). Care should always be taken to destroy or disinfect all sputa of those who have pneumonia.

Influenza is now believed to be spread by a germ which finds its way from infected handkerchiefs and other articles and places into the nose, throat, and air-passages of persons susceptible to this disease. The measures for its restriction are therefore obvious—isolation and disinfection.

Diphtheria is spread by the sputa, saliva, and whatever comes from the throat and mouth of the patient, and by the dust which results from the drying of such saliva, etc. The germs of diphtheria sometimes remain in the throat weeks after apparent complete recovery. For its restriction and prevention, isolation and disinfection are the important measures—isolation of every infected person and thing, and their complete disinfection.

Typhoid Fever.—Unlike typhus fever, typhoid fever is not often contracted directly from the sick person, but usually from the discharges from the bowels of the sick person. These should always be properly disinfected. Undisinfected discharges, if dried and formed into dust, may spread the disease through the air. The chief source of danger, however, is believed to be drinking-water contaminated by sewage or leachings from privies, etc. The germs of typhoid fever are killed by boiling. All suspected water should be boiled.

Scarlet Fever.—The germ of scarlet fever is not yet identified. But that there is a germ seems to be proved by the well-known communicability of the disease from person to person. It is spread by the discharges from the nose, mouth, and throat, and probably also by the minute scales which are thrown off from the surfaces of the body. Isolation and disinfection are the measures by which this disease is restricted.

Measles is spread from person to person, directly and indirectly. Isolation and disinfection should be enforced.

Whooping-Cough is a communicable disease, which, in Michigan, causes more deaths than does small-pox. Whooping-cough is spread from person to person, directly and probably indirectly. Most of the following "General Directions," except perhaps those for disinfection of the discharges from the kidneys and bowels, are applicable for its restriction.

Small-pox.—Small-pox is a contagious disease; it spreads by means of particles given off from the surfaces of the body. The following rules are applicable for the *restriction* of small-pox whenever the disease occurs, but by vaccination and revaccination small-pox may be and should be almost wholly *prevented.* One vaccination or once having small-pox does not protect for life. Revaccination should be had once in about five years, also whenever small-pox is prevalent and certainly immediately after one has been exposed to the disease.

Cholera is spread in much the same way as is typhoid fever. The same precautions recommended to prevent the spreading of typhoid fever should be taken as soon as cholera appears. The first evacuations of choleraic diarrhea are infectious, and should, as well as all that follow, be immediately carefully disinfected. Suspected drinking-water should be boiled.

GENERAL DIRECTIONS FOR THE PREVENTION AND RESTRICTION OF SCARLET FEVER, DIPHTHERIA, SMALL-POX, AND TYPHUS FEVER.

1. To avoid the contagium or special cause of the disease:

Isolation and disinfection are the important measures. Unless you are needed to care for the sick or are protected by having recently had the disease, or, in case of small-pox, by thorough vaccination, do not go near the sick person. Do not allow your lips to touch any food, cup, or spoon, or anything else that the sick person has touched or that has been in the sick-room. Do not wipe your face or hands with any cloth that has been near the sick person. Do not wear any clothing that the sick person has worn during, just before, or just after his sickness. Keep your hands free from discharges from the body or skin of the sick person. Do not touch him with sore or scratched hands. Avoid inhaling or in any way receiving into the mouth or nose the branny scales that fall or peel from one recovering from, or apparently wholly recovered from scarlet fever; also any dust from the dried saliva of a person sick with or recovering from scarlet fever or diphtheria. The germs of diphtheria sometimes remain in the throat weeks after apparent complete recovery.

2. To restrict the contagium or special cause of the disease:

Isolate the sick. Separate those sick with any of these diseases, even if they are but mildly sick, from all persons except necessary attendants. A person sick with any of these diseases should not be permitted to suffer for want of care, food, or comfort; but all his wants should be attended to by adults, or by those who are protected by proper vaccination or by having had the disease. Children and those who are not thus protected should be kept away from these diseases. Do not go from a sick-room to a child or other unprotected person until after change of clothing and thorough washing of hands, face, hair, and beard.* Always wash the hands thoroughly after any handling of the sick person or anything that has been in contact with the sick person. Keep those who have been exposed to any of these diseases away from schools, churches, and other assemblies, and from all children, until it is known whether they are infected, and if they are found to be infected isolate them until after complete recovery and thorough disinfection.

3. To destroy the contagium or special cause of the disease:

(*a*) Thoroughly disinfect or destroy whatever is removed from the person sick or from the sick-room. All discharges from the lungs, nose, throat, and mouth should be burned or disinfected. All other discharges from the patient should be received into vessels containing a strong solution of chlorinated lime (not less than one ounce to each discharge from the bowels), and then, in cities, thrown into the water-closet; elsewhere they should be buried at least 100 feet distant from any well; or where this is impracticable they may be received on old cloths, which should immediately be burned or disinfected and buried.

(*b*) Thoroughly disinfect the sick-room and its contents after removal of the sick person, whether by death or recovery. Disinfect as follows:

Burn whatever has been in contact with the sick person and is not too valuable to burn. Garments, sheets, blankets, etc., such as will not be injured thereby, should be boiled for half an hour. After death or recovery of the patient subject the room and *all its contents* to the fumes of burning sulphur. Before fumigating hang up and loosely spread out clothing, bedding, etc., or spread them loosely over chairs, leaving the bedstead, other furniture, and everything in the room. Close all openings in the room very tightly. For a room ten feet square place three pounds of sulphur in an iron pot or pan that will not leak, supported on bricks over water in a tub. Set the sulphur on fire with live coals or with a spoonful of alcohol lighted by a match. Be careful not to breathe the sulphurous fumes. Leave the room tightly closed for several hours, then air it thoroughly. For a large room use a proportionally larger quantity of sulphur, at the rate of three pounds for each 1000 cubic feet of air-space, and burn as much as possible of the sulphur used.

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*Corrosive sublimate, 1 part to 1000 parts of cologne or water, is sometimes used by physicians for this purpose. This solution should be labelled "Poison."

4. Keep your premises and everything connected therewith clean, but remember that *the contagium of these diseases may attach to the cleanest article* of clothing, food, drink, book, or paper, if it is exposed thereto.

5. The law requires householders and physicians to notify the local health officer of the first case and of every case of one of these diseases. The penalty for violation of this law may be as much as $100. Plain and distinct notices should be placed on the house or premises in which there is a person sick with one of these diseases.

Unless the local board of health orders otherwise, whoever violates the orders of the health officer is liable to a fine, and to imprisonment if the fine is not paid.

More complete statements of means of restricting and preventing these diseases are in the pamphlets issued by the State Board of Health, on the "Restriction and Prevention of Scarlet Fever," the "Restriction and Prevention of Diphtheria," the "Restriction and Prevention of Measles," the "Restriction and Prevention of Small-Pox," the "Restriction and Prevention of Consumption," and the "Prevention of Typhoid Fever," any of which may be had by addressing the Secretary of the State Board of Health, Lansing, Michigan.—*Dietetic and Hygienic Gaz.*, 1895, xi., 762.

REPORT OF A CASE OF DIPHTHERIA SHOWING THE SHORT PERIOD OF IMMUNITY PRODUCED BY ANTITOXIN.

F. E. Waxham (*Chicago Med. Rec.*, 1895, ix, 306) relates the history of a boy four years old, with well marked symptoms of diphtheria. Membrane covered the tonsils and respiration was so impeded as to clearly indicate an invasion of the larynx. These symptoms gradually increased and respiration became so difficult as to require an operation without delay. Intubation was performed July 2, 1895, and 10 cc. Behring's antitoxin No. 2 given hypodermically. A culture from the throat proved the case to be one of true diphtheria. Soon after leaving the patient the intubation tube was expelled. Recurrent and urgent dyspnea required the prompt introduction of a larger tube. This tube was expelled on the fourth day, when its presence became no longer necessary. The membrane covering the fauces disappeared in the course of two days after the use of the antitoxin and the temperature became normal although the pulse remained somewhat rapid and weak, and the boy made a slow convalescence, remaining unusually weak and feeble for two weeks and subject to sinking spells whenever getting excited. On July 24, the health department made a bacteriological examination demonstrating the presence of bacilli still in the throat. On July 26, membrane covered the fauces and was not present at the time the examination was made by the health department. The membrane persisted for a week and gradually disappeared under ordinary treatment.

During this secondary attack or relapse the patient seemed to suffer but little inconvenience, the attack being mild. The action of antitoxin is as yet hardly understood. If it, as many believe, neutralizes the toxins of diphtheria we can readily see that the immunity produced must be of short duration. The disease would antagonize and neutralize the remedy. In a mild case the immunity produced by antitoxin would naturally be of longer duration than in a severe one and when used as a prophylactic for the same reason should produce a longer period of immunity then when used as a curative agent.

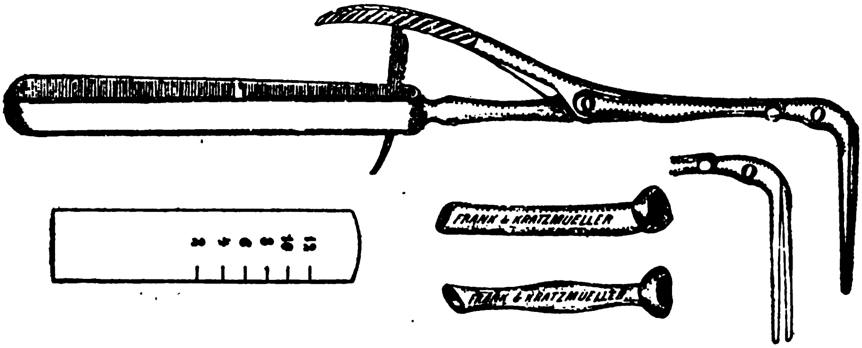
SERUM ANTISTREPTOCOCCIQUE.

Eisendrath says (*Chicago Med. Rec.*, 1895, ix 271) that a most valuable contribution to serum therapy has been made by Marmorek. He inoculated rabbits by successive passages from animal to animal with virulent cultures of streptococci until he obtained a microörganism of such a virulence that 1-100 millionth of a cubic centimeter killed an animal. He then immunized horses, sheep and asses by successively increasing doses of the living cultures. It required six months to accomplish this and to obtain an active serum. A rabbit of 1,500 g. injected with 0.2 cc. of the serum, and then ten or twelve hours later with ten times more than a fatal dose of the virulent culture, remained well. Injected into 413 cases of erysipelas the mortality was only 3,87 per cent. a little less than the average of 5-6 per cent. He then treated phlegmonous inflammations, post-operative infections, puerperal fever cases, and pseudo-membranous anginas, mixed infection, which latter had not been influenced by the antitoxin of diphtheria. In some cases the results have been most excellent, in others it has been impossible to judge the action of the serum, so that its efficacy must still be considered as being an open question.

NEW INTUBATION INSTRUMENTS DEVISED BY DR. PAUL FERROUD, OF LYONS, FRANCE, AND DR. W. W. WETHERLA, OF CHICAGO, AND SOME REMARKS ON BEHRING'S ANTITOXIN.

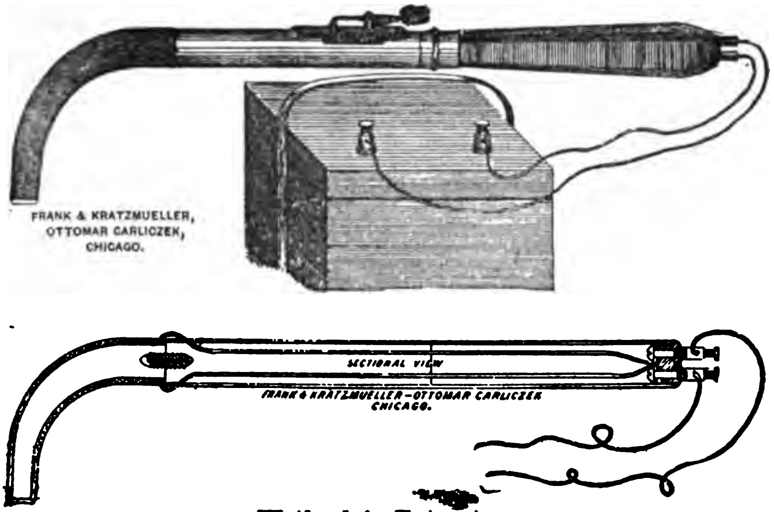
Wetherla's (*Chicago Med. Rec.*, 1895, ix, 290) objections to O'Dwyer's instruments are that they are complicated, difficult to disinfect, soon become loose and rickety, are expensive, and the operator does not have complete control over the tube during insertion. He thinks Ferroud's instruments overcome these objections.

The length of the instrument is, handle 23 cm., jaws or blades 4 cm., these being set at a right angle to the handle or shaft. The blades are long and slender and somewhat pointed, being roughened or transversely furrowed on the anterior and posterior surfaces, which are intended to come in contact with the walls of the tube. They penetrate deeply into the tube without completely filling its lumen. By pressing firmly upon the lever with the thumb, the blades are separated and brought into intimate contact with the walls of the tube, holding it firmly in position for introduction or extraction.



Ferroud's In and Extubator.

The tubes invented and used by Dr. Ferroud are of the general shape of O'Dwyer's, with some few changes, and are without an obturator. They are funnel shaped at the upper opening, in order that the blades of the forceps may more readily be made to enter the tube. The lower extremity is beveled on the flat surface which corresponds to the left index finger in the patient's mouth, and is cut at an angle of 45°, thus rendering it more easy for the tube to penetrate the larynx. The lower end of the tube is not sharp like a wedge, but is well rounded off, and is blunt rather than sharp. It presents no sharp cutting edges to injure the tissues.



Wetherla's Extractor.

This is an electro-magnetic extractor. It is used only for extracting, and only tubes of iron can be removed with it. The tubes should be made of soft wrought iron, which is the best conductor of the magnetic lines; in other words, soft pure iron possesses the greatest magnetic permeability. If the tubes be made from cast iron or steel, which are of inferior permeability, they will have to be subjected to a higher magnetizing force than would be necessary if soft iron of higher permeability had been selected. Steel retains its magnetism longer than soft iron, but it is not susceptible of such a high degree of saturation as soft wrought iron.

The objections to this extractor is the source of power and the inconvenience of carrying to the patients' house a battery weighing twenty-five pounds; the advantages are the facility with which the tube can be removed and the impossibility of doing damage to the larynx by abortive attempts at removal.

SOME PATHOLOGICAL CHANGES PRODUCED BY THE INJECTION OF SERUM.

William Vissman (*N. Y. Polycl.*, 1895, vi, 336) injected antitoxin under the skin of rabbits and obtained the following results:

At the site of injection was a nodule which extended over a radius of about an inch from the point where the needle had entered. The nodule was slightly painful on pressure, but the general condition of the animal was good as far as could be observed. (Temperature was not taken.) At the end of the second day the nodule began to grow smaller and was scarcely perceptible on the animals killed the seventh day after the injections.

On cutting through the nodules the sub-cutaneous tissue was found to be impregnated with a straw-colored serous fluid containing very few leucocytes. This fluid was always found to be sterile. As time elapsed the edema grew less marked.

As the object of the investigations was to determine the action of antitoxin upon the kidneys, little attention was paid to other organs, more than to note that the spleen and liver were slightly swollen and redder than normal.

The kidneys of the animals killed twenty-four hours after the injection were very firm and of a dark red color. On the cut surface the cortical substance was very much injected, slightly opaque, and a little more prominent than the medullary substance, which was pale in color.

On microscopic examinations of fresh sections in 0.6 per cent. salt solution the malpighian bodies and capillaries of the cortex were found to be distended with blood. The epithelial cells of the tubules were filled with refractive granules, obscuring the nuclei, which were only brought to view upon the addition of dilute acetic acid. There were no casts found in the tubules. These conditions were found in all of the animals, and, as the time after the administration of the antitoxin increased, the injection of the blood vessels decreased and the cloudy swelling became more prominent.

Those animals which had received more than one dose had slight hemorrhages into the tubes. Fat metamorphosis of the epithelium was not observed in a single instance. The doses administered to the rabbits were about equal to or a trifle less, proportionately, than the doses administered to children in cases of diphtheria. He concludes that, since the injection of serum into rabbits produces a cloudy swelling of the kidneys, or an acute nephritis, if all of those persons having virulent diphtheria bacilli in their fauces were treated with antitoxin, many would be injured for an uncertain benefit to a very few. After the disease has made such progress that it can be diagnosed, the toxin has produced such an effect upon the organisms that, judging from the experiments of Behring, Park and others, little benefit is to be expected from the antitoxin. And since observing the results of experiments on rabbits just reported, it is highly probable that instead of reducing the mortality of diphtheria, antitoxin has really increased the death rate.

A CASE OF TRAUMATIC TETANUS TREATED WITH TETANUS ANTITOXIN. RECOVERY.

The patient was a boy, six years and a half old, and the case is reported by Dr. Wray Grayson (*Pittsburg M. Rev.*, 1895, IX, 303). His foot was injured by stepping on a wire nail, while playing in the neighborhood of a stable. Seven days later, several days after the wound seemed perfectly healed, he became irritable and did not want to eat. The next day there was some stiffness of the jaws and muscles of the back of the neck, and an unnatural expression of the face. At the same time the small toes of the wounded foot were drawn under and gave some discomfort. Sleep became broken, and he would laugh and cry without apparent cause. On the twelfth day trismus was well marked, his jaws being pretty firmly closed. His injured foot became much and permanently extended; he could not bring the heel to the floor, and complained of pain when any attempt was made to do so. He did not seem to have proper control of himself, but would fall easily when attempting to walk. Four days after the illness began he remained in bed all day, was restless, and complained of feeling sick. The next day there was no improvement in the general condition, but the trismus was not so marked. During the previous night, he would start from sleep with a scream, caused by biting the tongue from spasmodic closure of the jaws; the tongue was wounded and bleeding; a tendency to priapism was also noticed, and this continued to be a troublesome complication throughout the course of the disease.

July 11th, thirteen days after the injury, the patient was restless and irritable; pulse 115, temperature 100.5°. He complained of pain in the back of the neck and stiffness of the jaws. Could not bring his head forward, and the attempt to do so gave pain. Had epigastric pain and some difficulty in swallowing. Right foot in extreme tension (in the position of talipes equinus). Can open the mouth an inch or more, but it gives some pain to do so. Tongue gored and wounded in several places. The following was prescribed:

℞ Chloral . . . . . . grs. LXXII
Potassii bromidi . . ʒiv
Aquæ . . . . . . ℥fiii
M Sig. A teaspoonful every three hours.

The official "compound cathartic pill" was given as a purgative. All diet was liquid, and perfect seclusion was enjoined. The chloral and bromide mixture was continued throughout the treatment.

The patient did not improve, but rather grew worse, so that on July 16th it became necessary to use chloroform to relieve the paroxysms. The next day 10 c. cm. of Gibier's Tetanus Antitoxic Serum was injected into the left buttock, the next day another dose of 10 c. cm. was given, and on each of the next three days 5 c. cm. was given. The paroxysms grew less severe after the first injection, and the patient made a rapid and uneventful recovery.

On July 28th, nine days after the first injection, a papular eruption appeared on the face and arms, which spread over the entire body, but it soon disappeared and caused no inconvenience except itching.

The case reported may not, by some, be looked upon as a typical case of tetanus, and yet the nature of the injury, with the subsequent clinical history, affords fair proof of a correct diagnosis. It is highly probable that the use of the antitoxin, not only had a beneficial effect, but that it had much to do with bringing about a favorable issue. The effect of the chloral and the bromide in allaying restlessness and procuring sleep, was very apparent, and the influence of the chloroform in relieving the pain connected with the frequent spasmodic seizures was undoubted, but there seemed to be no permanent benefit, until after the use of the antitoxin had been instituted. There was a very decided change for the better after the second injection. All injections were made well into the tissue of the left natis, and on account of the patient's restlessness, he was put moderately under chloroform before each operation. There was almost no local irritation and never any evidence of suppuration. The syringe was of Berlin make and designed for serum injection. Syringe and needles were made aseptic before each introduction of antitoxin.

TWO CASES OF RAYNAUD'S DISEASE.

McCall Anderson (*Glasgow M. J.*, 1875, xliv, 416) reports two cases, both children—a girl 8 years old and a boy 5 years old.

The girl entered the hospital with a history of periodic swelling and discoloration of the hands for four years, and of the feet for four months; the boy entered with a history of intermittent discoloration of the ears, the feet and the hands for two years.

In neither case was the previous history or the family history of any importance. The treatment did not give very satisfactory results. It consisted of general tonics, cod liver oil, extract of malt, thyroid feeding, nitro-glycerine and electricity. The continuous current (20 Leclanché cells) was applied daily, the positive pole over the spine and the hands or feet placed in salt water along with the negative pole.

In the first case an attack was carefully noted as follows:

"Both hands are red and swollen, and the finger tips are purple—*local asphyxia*. The discoloration fades away to the normal abont 2 inches above the wrists. The toes are affected in a lighter degree. Pressure on the palm or dorsum causes blanching, which persists for an abnormally long time. The hands and feet are very distinctly cold compared with other parts, and feel boggy to the examining finger No other parts but the hands and toes are affected at present. The patient who is of a distinctly heroic temperament when pain is concerned, will not admit that there is any pain in the parts, but only numbness, coldness and tingling. Elevation of the arms and rubbing the fingers have no effect on the condition. *Local syncope* has never been noticed between the attacks. Some thickening of all the tissues, however, persists. Sensation appears to be practically normal."

Certain negative points, if they may be so called, require enumeration:—1. There is no irritability of temper. She is the best child in the ward, and particularly amiable in disposition. 2. The heart is apparently normal. Pulse 80. 3. Urine is normal; no albumin, sugar, or abnormal blood derivatives. 4. Temperature is normal. 5. There is no alteration visible in the blood corpuscles, and the percentage of hemoglobin is normal. 6. There is no constriction of the retinal arteries such as has been described. 7. As mentioned previously, the general health is excellent.

EXCESSIVE MASTURBATION IN A GIRL OF SEVEN YEARS.

Lanphear reports (*Alienist and Neurologist*, 1895, xvi, 460) a case of masturbation in a female seven years of age. She was of good family without neurotic taint.

When three years of age she was found producing friction of the vagina with her index and middle fingers, and upon being watched was found to be in the habit of masturbating two or three times each night. At this time she was examined by a physician and no abnormal condition of the genitals found except a slight hyperemia. Under proper treatment she seemed to be cured, becoming a plump, bright, exceedingly intelligent child. She was sent to school at the age of six. Soon numerous reports came in that she was having intercourse daily with a number of boys, ranging from ten to fifteen years of age, and upon investigation this was found to be true. She was withdrawn from school and kept from the companionship of boys, but occasionally would escape from home and invariably be caught under some back stairs or in an alley enjoying herself in the sexual act with some playmate. She was then confined strictly to the house and was directly caught masturbating; in this practice she kept getting worse in spite of almost constant watching; the moment her mother's or sister's gaze would be directed elsewhere her hands would go under her clothing and the excitation begun. At last she became so bad that unless her hands were tied she would attempt to masturbate regardless of who might see her. At this time (when her hands were tied) she would sit for hours gazing into vacancy; mentally she appeared dull and stupid, paying no attention whatever to books or playthings, never engaging in conversation—briefly answering "yes" or "no" to inquiries or disdaining to answer if she felt so inclined; she lost flesh rapidly, became pallid with dark circles around the eyes; she ate little, preferring to sit at table and secretly titillate the clitoris and vagina until repeated orgasms were produced and she would become limp and listless; but her sleep was good.

The mons veneris and clitoris was exceedingly large—as large as in a fully developed woman; the vagina and hymen somewhat congested; the hymen greatly stretched. No pathological condition of the rectum or of the genitals could be detected. The irritation was therefore thought to be of central origin.

She was advised to go to the country for the summer, with constant out-door life and a vigilant, pleasant companion who would prevent her masturbating during the day, using the straps at night until she could be trusted without; with moral suasion, and the internal use of

℞ Potassi bromidi ℥ss
Extracti salicis nigrae fluidi
Mucilag. acaciæ aa ℥ij
Misce. Sig. Teaspoonful after meals and at bedtime. With this, good, rich food and enough exercise daily to make her tired.

The fluid extract of "pussy willow" was prescribed because with some patients it acts as a most powerful sexual sedative.

She could not be hypnotized. She took the mixture for two months. She was looking much better, was quite bright intellectually and said she believed she could control her inclinations if not watched—in fact she asserted that she did not wish to masturbate any more, and she seemed really anxious to get well. The following prescriptions were advised:

℞ Sodii bromidi ʒv
Tinct. hyoscyami ℥i
Elix. simplicis ℥ii
Misce. Sig. Teaspoonful after each meal.

℞ Quininæ sulphat ℈ii
Camphoræ monobrom ʒss
Ferri sulphat. exsiccat ℈i
Misce et ft. capsul No. XL. Sig. One capsule one hour after each meal.

The iron was given on account of the anemic condition. After two bottles of the mixture were taken the compound syrup of hypophosphites was substituted and the capsules were continued.

She improved rapidly, so that in the autumn, she was placed in a convent to pursue her studies. At Christmas time she was reported as in excellent condition, but since that date no details have been obtainable. The prognosis in such a case is an interesting, but unanswerable question.

Physiognomists claim that there are two or three well defined varieties of the bicycle face, anxiety and despair being clearly shown.—*Popular Sc. News,* 1895, xxix, 125.

PEDIATRICS

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ORIGINAL ARTICLES.

CONGENITAL LUXATION OF THE KNEE.*

BY HENRY LING TAYLOR, M. D.
New York.

CONGENITAL luxation of the knee is a rare affection, which is either altogether passed over or but briefly mentioned in most surgical treatises. Of 98 cases of congenital dislocation seen at Langenbeck's clinic, 90 were at the hip and one at the knee, and of 57 cases observed at the New York Orthopedic Dispensary, and reported by Drs. Ketch and Hubbard, 55 were at the hip and one at the knee. In a paper in the *Revue d'Orthopédie* for January, 1891, Phocas, of Lille, describes a case in detail and gives a synopsis of 23 observations, collected from medical literature, and Prof. J. Wolff, of Berlin, describes a case of multiple congenital dislocations, including luxations of both knees, in the *Zeitschrift fur orthopädische Chirurgie*, Vol. II, No. 1, 1892, and brings the number of recorded cases up to 29. In this country cases have been reported by Hamilton, Sayre, Myers, Gibney, Ketch and others, of which Hamilton's, Sayre's and Myers' are included in Wolff's list.

Dr. Gibney's cases are reported in the *Archives of Pediatrics* for September, 1890. The first case had bilateral congenital luxation of the tibia forward, also of the hips and valgus position of the feet. When first seen at four weeks of age no patellae could be made out. At three years of age the patient walked well, the knees could be flexed beyond 90° and the patellae could be felt as small nodules. Dr. Gibney's second case was an infant with bilateral anterior dislocation of the tibia with recurvature of the knees, right pes equinus, left pes valgus and rudimentary patellae.

Dr. Ketch's case was a girl three years old shown to the Orthopedic Section of the New York Academy of Medicine in 1889. There was a right dislocation of the head of the tibia forward with eversion and genu valgum; the ligaments were relaxed, especially the internal lateral, both at that time and when first seen at 18 months.

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*Read at the Orthopedic Section of the New York Academy of Medicine, Dec. 20, 1895.

In September, 1895, a female infant, five weeks old, was brought to Dr. Townsend's service at the Hospital for the Ruptured and Crippled, with club hands due to absence of the radii, and a peculiar congenital deformity of the left knee, consisting in an excessive genu varum with great laxity of the external lateral ligament of the knee, permitting a range of motion from 15° to 70° of adduction, and with a strong tendency to backward displacement. The abnormality was not due to bending of the shafts of the femur or tibia, but was confined to the knee itself. Brief mention is made of the above case as it appears to belong to the congenital luxations of the knee.

The history of a case which was brought to me in May, 1888, will sufficiently illustrate the main points of the symptomatology. This was a boy, seven months old, the first born of twins, in whom the peculiar condition of the knees was noticed immediately after birth. This baby's twin brother weighed seven pounds at birth, the same as my patient, and was perfectly formed; there had been no deformity in the family so far as known. One child older than the twins and one born since are free from defect. My patient was a breechling, coming into the world with the thighs flexed upon the abdomen and the knees hyperextended so that the feet lay either side of the aftercoming head. The malposition of the legs persisted after birth, and it was at once noticed that the knees were bent forward instead of backward, and that they could not be brought back—flexed—beyond a straight line even by using considerable force. After being straightened in this way they would spring back into the abnormal position, so soon as the pressure was removed. They readily bent forward to a right angle with the thigh or 90° of hyperextension, and habitually remained at a considerable angle of hyperextension, when left to themselves. The popliteal spaces were smooth and devoid of crease or wrinkle, but there were creases in front of the knee joint, caused by the reversed bending of the knee. The thighs had been straightened down and kept extended by binding a board splint upon the baby anteriorly, and at the time of my examination were in normal position, as was every part of the body except the knees. The hips were in place, the feet were perfect in form and function, and the spine, trunk, head and upper extremities were normal in every particular. The knees remained constantly in hyperextension, that is with the normal direction of bending reversed, and as the baby kicked from time to time, the contraction of the quadriceps would increase the hyperextension and at the same time draw the head of the tibia forward and rotate it outward. The knees were not observed to move in the direction of flexion. The knee ligaments were much relaxed in all directions, permitting a lateral motion of 10° or more to either side. The right knee could easily be hyperextended 28° and the left 30°, while there were 22° of passive flexion beyond a straight line on the right side and 20° on the left, showing a greater range of motion in front of a straight line than back of it. In all positions the head of the tibia was displaced forward, and the femoral condyles projected prominently into the upper part of the popliteal space, which was smooth, the creasing being in front of the knee. The leg was somewhat everted at the knee. These displacements could be largely overcome by manual force, owing to laxity of the ligaments, but immediately recurred so soon as pressure was removed. In all manipulations, however, the head of the tibia failed to slide back fully into its proper position. No rudiment of a patella was felt at this time, either by myself on repeated examination, or by several surgeons who examined the case. At this time my patient measured R. A. and L. A. 10½, he weighed 19 pounds and had cut five teeth. His brother measured R. A. and L. A. 11¼, he weighed 19½, and had cut six teeth. The treatment consisted in holding the knees at the limit of comfortable flexion and in as normal relation as possible, and in preventing lateral motion, by means of light wire splints with proper strapping. After four months, hyperextension had diminished 8° on the right side and 2° on the left, while flexion had increased 68° on the right and 38° on the left. There was now considerable voluntary flexion; the joint capsule was still very lax and the knees were weak laterally.

Apparatus were now applied, which prevented lateral motion and any straightening of the knees beyond 150°, but flexion beyond this point was not checked. After one year of treatment the knees had improved very much in strength, and there was but little hyperextension or lateral motion. Both knees could be flexed more than 90°; the right which had always been the better, was still somewhat in advance of its mate. The patellae could now be felt as very small nodules in the quadriceps tendon. The apparatus were now changed to permit free flexion through nearly the full range, hyperextension and lateral motion being checked. The patient reported in September, 1889, walking perfectly in his braces. He was able to walk much earlier, but it was thought prudent to hold him back until the knees were stronger. He was also able to walk equally well without braces, but this was not allowed except to demonstrate his ability, lest the weak ligaments should be unduly strained. The tibia were still somewhat displaced forward. In the fall of 1891, the children being three and one-half years old, my patient was 41 inches tall and his brother 40½. The patient's patellae were now well developed, measuring one and one-fourth by one and one-half inches, about one-eighth inch less than his brother's. This patient has continued to wear jointed braces preventing hyperextension and lateral motion at the knee up to the present time. He is now eight years old, well-grown, and somewhat larger and heavier than his brother. He is very active, in fact the more active of the two. For a long time he has been able to walk perfectly well without his braces, and no abnormality in his gait or appearance is noticeable either with or without the supports. Up to this time in view of his great activity and heedlessness, it has been thought wiser for him to wear them as a protection; he leaves them off at night and for short periods in the day time. Without the braces there are still a few degrees of passive hyperextension at the knee when, the patient being recumbent, the feet are lifted but not more than is sometimes seen in normal children. There is passive flexion to 45° on the the right side and 55° on the left, the range of active flexion is nearly as wide. There is slight lateral mobility and no noticeable deformity.

Adding this case with those of Drs. Gibney, Ketch and Townsend to the 29 cases reported by Wolff, we have 34 recorded cases of congenital luxation of the knee, in 18 of which the deformity existed on both sides, and in 16 on one side only. In 24 of the 34 cases the displacement of the tibia was anterior or prefemoral. In at least 12 of the cases no patella was felt in the affected knee or knees at birth and for some time after; in 5 of the 12 it is noted that the patella could be felt as a small nodule in the course of a year or two; most of the others were observed only a short time. In only one case, reported by Carl Muller, was the absence of the patella anatomically demonstrated. As has already been stated while a few cases of luxation in other directions have been observed, the large majority are of the tibia forward with hyperextension or recurvature of the knee. Of the prefemoral cases two types are described, one bilateral of which a considerable number of the reported cases have been observed in fetuses, still-born children, and monsters and which is usually associated with other congenital anomalies; the other unilateral, in otherwise perfectly formed children. The case detailed this evening presents an exception to this rule; with a bilateral deformity of the knees the child was free from other defect. Phocas states that lateral mobility at the knee is the exception and confined to the bilateral cases usually associated with other deformities. With the stretching which the lateral as well as the other ligaments must undergo to permit the excessive hyperextension and forward gliding of the tibia, lateral motion would be expected, as has been noted in many cases both bilateral and unilateral, abduction with eversion predominating.

As to etiology, a defect of development seems to be the probable explanation. There is no sufficient evidence that trauma, inflammation or paralysis is answerable for the condition. Many of the cases have a history of breech presentation, with

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the thigh flexed, legs extended and feet applied to the head; it seems as probable that this position was assumed owing to the abnormal position at the knees, as that the knee deformity was due to the abnormal presentation. The former view is strengthened by the numerous cases in which the knee deformity is associated with other defects evidently due to abnormal or retarded development. Phocas' case as well as my own was the first born of twins.

It is frequently stated in the books that the deformity has in most cases been readily corrected, and that the prognosis is good.

As we have few records of cases under observation for any considerable length of time, and no reports tracing the subjects of this condition to adolescence or adult life, the ultimate result must be a matter of conjecture; but it is not unreasonable to suppose that a displacement often difficult to reduce, with such a marked tendency to recurrence, and associated with such laxity in the ligamentous structure of the joints, cannot be safely left to itself until it has been held and exercised in position, and protected from undue strain for a considerable time. A number of cases have been reported in which a good result was obtained by either suddenly or progressively reducing the deformity, and holding the knee by retentive apparatus, so arranged as to progressively increase flexion. It seems to the writer advantageous to employ such means as will permit normal, while preventing abnormal, motion. Professor Wolff claims to be the pioneer in the operative reposition of a congenital luxation, having replaced, with a satisfactory result, a congenitally dislocated knee, in a five-year-old girl, in 1887, thus antedating Hoffa's operation on the hip. Phocas, having found difficulty in replacing the knee dislocation in a young infant, was led to perform manual osteoclasis at the lower end of the femur, in order to restore flexion, believing that the condition was not a true luxation, but a forward sliding of the femoral epiphysis. A good result is reported.

In the case detailed at the beginning of the paper, attention is called to the twin pregnancy, the abnormal presentation, the bilateral luxation, with recurvature, the lateral mobility, and the rudimentary patellae in an otherwise perfectly formed child, and to the satisfactory condition and function of the legs, and development of the patellae to practically normal size, after prolonged orthopedic treatment.

As there are several gentlemen present who have observed interesting cases of congenital knee luxation, not included in our synopsis, it is hoped that the scanty number of cases may be considerably augmented during the discussion, and since recorded cases of this affection in youths or adults are lacking, it is especially important that observations of such cases should be reported, in order that we learn the natural progress of the affection, and the ultimate results as to the shape, strength, and function of the limb, under varying treatment.

TWO CASES OF WATER-PARSNIP POISONING.

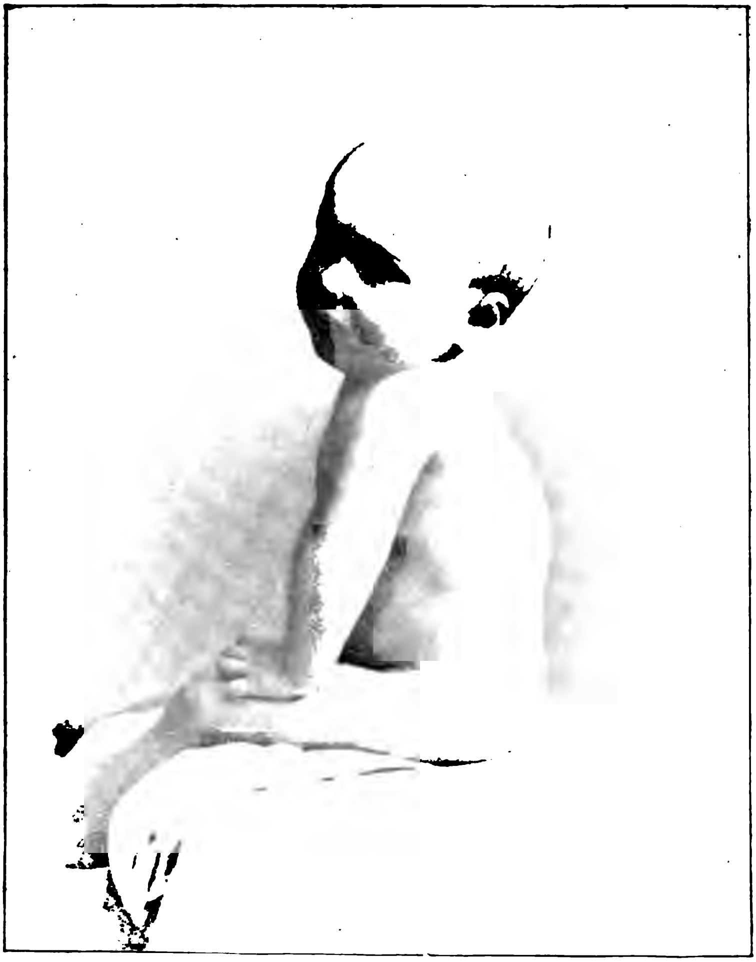
By HERMANN GRAD, M. D.
House Surgeon to the Newark City Hospital, Newark, N. J.

ON APRIL 7th, while at Irvington, N. J., Henry Bischoff, aged 15, and Fred Bischoff, aged 13, found in a swampy place some roots, which they took to be parsnips. Henry, the elder, ate three pieces, and Fred two pieces. After walking for half an hour, Henry complained of being sick to his stomach, and vomited slightly. He was pale, and perspired freely. Fred also felt sick, and both rested in the grass at the road side, where they were found and taken to the nearest drug store. At the drug store Henry, who was in a partial stupor, vomited violently, and became unconscious. An ambulance took them to the hospital; but before their arrival Henry had two convulsions. Fred was much scared, but nothing unusual was noticed, except that he perspired freely, was pale, and his head was drawn to one side at times, but he had no convulsions.

They arrived at the hospital at 8:15 P. M., April 7th, 1895, about three and a half hours after eating the roots. On admission, the elder one was unconscious; his face and lips pale; the pulse full and slightly accelerated; the breathing deep and noisy; and the muscles of the face violently twitching, so that his mouth at times would be drawn together to very small limits. The face would become deathly pale, and the skin covered with a cold perspiration. Suddenly all the twitching would cease, but in a short time the fingers would again begin to move, and with extreme rapidity the convulsion would become general. The head would be drawn backwards; the breathing entirely suspended; the pulse feeble, and at times imperceptible, and the mouth and nostrils covered with froth of a strawberry color. He had three convulsions in about thirty minutes, the last one lasting a considerable time longer than the previous two. He died soon after the third convulsion.

Fred, the younger, vomited very freely, as a result of the emetics which had been given to him at the hospital. His face twitched a few times, and the head would be drawn to one side, mostly to the right. He made a rapid recovery, and the next morning was able to eat a good breakfast.

On the 12th of April the root was planted. It is now about three feet high and has many flowers and branches. The plant was identified by Dr. H. H. Rusby, of New York, as the *cicuta maculata*, or water-parsnip.



A RACHITIC CURVE OF THE SPINE SIMULATING POTT'S DISEASE.

(Children's City Hospital, New York.)

A CASE OF CARDIAC HYPERTROPHY—PROBABLY IDIOPATHIC.*

By WAYLAND C. CHAFFEY, M. D.
London, England.
Physician to the Royal Alexandra Hospital for Sick Children, Brighton.

G. H. aged 3 years, was admitted under my care at the Children's Hospital on Oct. 15th, having been sent by Dr. Treutler, of Hove. The child had been ailing for about three weeks in an indefinite way, and getting weaker There was no history of either alcohol or syphilis, or any other exciting cause that could account for his condition. *On admission*, there was great pallor, with restlessness, quick breathing and feeble pulse. There was no cyanosis or edema, and no paralysis. Examination of the chest revealed nothing abnormal in either the lungs or the heart. Milk and stimulants were administered, but the child become rapidly weaker and died next morning.

Post Mortem Examination:—The body generally was fairly well nourished. There were no signs of rickets, except slight beading of the lower ribs. The nasal bridge was not depressed and there were no scars about the mouth or anus. Both the pleural cavities and the pericardial sac contained a considerable amount of straw colored fluid. The lungs were non-adherent, much collapsed, and pale. There was no congestion or pneumonia. The mediastinal glands were normal. The heart was free in the pericardial sac and was greatly enlarged, probably nearly three times the normal. This fact was obvious to others present but I regret the organ was not weighed. There was very marked hypertrophy of the walls of the left ventricle and to a less degree those of the right. There was no dilatation of left cavities; but this change was considerable in the right ventricle, the tricuspid orifice being likewise affected. The valves of all the orifices presented a perfectly healthy appearance, there being no thickening or other abnormal condition. The aorta and pulmonary artery showed no signs of disease and were normal in calibre. There was very little clot in any of the cavities and on section the ventricular walls were somewhat deeper in color than usual and of about normal consistence. The foramen ovale was closed. The liver was enlarged and typically "nutmeg." Its consistence was firmer than usual. The spleen was slightly enlarged. The kidneys were rather large and their capsules stripped off easily leaving a nearly smooth surface. They had no granular appearance. On section, the cortical substance was pale, the medullary portion being deeper in hue and well defined. Their consistence was firmer than usual.

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*Reported at a meeting of the Brighton & Sussex Medico-Chirurgical Society—Dec. 5th, 1895.

The intestines presented a normal appearance. There were no ulcers or tubercles to be seen but two of the mesenteric glands were caseating and softening in their centres. *Microscopic examination* of the liver and kidneys showed some thickening of the perivascular sheaths of the small arteries, but there was no interstitial fibrosis of either organ. The changes observed were no more than what one usually finds in cases of long standing tricuspid regurgitation.

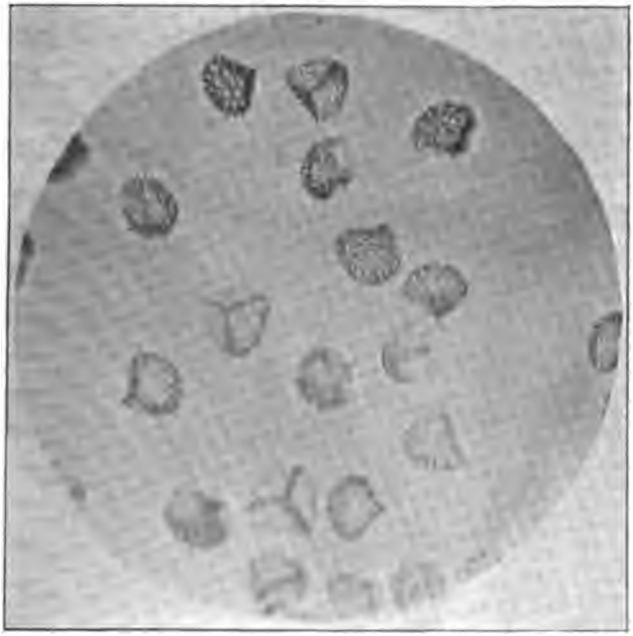
Remarks:—Idiopathic hypertrophy of the heart is recognized by some authors but the instances would appear to be extremely rare, judging by the dearth of individual cases hitherto reported. Personally, I have never before met with a similar case and am only able to give one reference, viz., that recorded by Dr. Hyde Salter in the *British Medical Journal* for July 28, 1866. Any cause which would bring about dilatation of the right ventricle with tricuspid regurgitation, would, I presume, be followed in the long run by hypertrophy of the left heart. Whether or no such a train of events happened in this case I am unable to say. The fact that the foramen ovale was closed and the septum ventriculorum prefect would seem to indicate that no difference in pressure existed at birth between the two sides of the heart. It is a singular fact that no one who examined the chest during the child's illness detected any abnormal signs referable to the heart. When examined by myself soon after admission the child was greatly excited, gesticulating as if wanting to be taken out of the bed. Consequently, the heart may have been acting more vigorously just then, rendering the tricuspid valve competent for the time being. However that may be I feel confident that no *bruit* existed at the time of my examination. The cause of death was collapse of the lungs from accumulation of serous fluid within the pleural cavities, though this did not amount to more than a few ounces in each. There was about one ounce in the pericardial sac. It is remarkable, moreover, that no edema or cyanosis existed during life.

Infantile Broncho-Pneumonia. — For asphyxic symptoms: *Sodium benzoate*, 0.50 gramme (7¾ grains); *acetate of ammonia*, 1.50 grammes (24 grains); *cognac*, 8 to 12 grammes (2 to 3 drachms); *gum mixture, syrup of tolu*, each 45 grammes (1½ fluidounces). Dessertspoonful every hour or two according to age of child. For intense disseminated hyperemia: *Powdered camphor*, 0.03 gramme (½ grain); *benzoic acid*, 0.15 to 0.20 gramme (2¼ to 3 grains). To make one powder. Give in a glass of milk. For cardiac asthenia: *Tincture of digitalis* or injections of *caffeine*. Combat general intoxication by cold baths if the pulmonary lesions are not too extensive.—*Marfan, Journ. d'Pract., Universal, M. J.*, 1895, ix, 381.

A NOTE ON THE OCCURRENCE OF LYCOPODIUM IN CHILDREN'S URINE.

By MORRIS MANGES, M.D.
New York.

ALTHOUGH the text-books on urinary analysis give a formidable list of the substances which may be found as foreign bodies in the urine, nowhere is mention made of lycopodium, a substance, which, from the generality of its use in infants and children, ought to be by no means infrequently found in urine passed (without the use of a catheter) by young children.



Lycopodium Pollen.
(380 Diameters.)

My attention was called to the subject while examining the urine of a girl who was suffering from purpura rheumatica. I examined the urine to discover whether there had been any bleeding from the kidneys. Instead of blood-cells, I found bodies, the nature of which puzzled me exceedingly. That they were foreign bodies was easily demonstrated by the examination of a specimen drawn by the catheter. I showed the slides to two experienced urinary microscopists. One of them was unable to recognize these bodies; the other at once stated that it was a pollen of some sort. Then remembering that about the only pollen in common use was lycopodium, I made an investigation and found that the mother was accustomed to dust the child's genitals with a powder containing this pollen. For the excellent microphotograph (380 diameters) I am indebted to Dr. H. G. Piffard. It renders any detailed description unnecessary.

THE OPHTHALMOSCOPIC APPEARANCES OF OBSOLESCENT TUBERCLE OF THE CHOROID.

By SIDNEY STEPHENSON, M.B.,F.R.C.S.E.

Ophthalmic Surgeon to the North-Eastern Hospital for Children and Surgeon to the Ophthalmic School, Hanwell, W.

SO FAR as my experience goes, ophthalmoscopic evidence of tubercle of the choroid is seldom obtainable until late in the course of such affections as general tuberculosis or tuberculous meningitis. One then finds scattered over the fundus oculi a limited number of small, raised, yellowish-white spots, almost or altogether free from pigment. They commonly have a rounded or oval contour and lie beneath the retinal vessels. They are generally most numerous in the neighborhood of the optic disc. They may increase in number day by day, but, as a rule, death occurs before they become large enough to give rise to any marked symptoms of inflammation. Although the condition is nearly always bi-lateral, yet considerable differences may exist between the two eyes.

Apart from this acute miliary tuberculosis of the choroid, there is a chronic form seen in strumous children, who may or may not be suffering from other tuberculous lesions—for example, phthisis, spinal caries, or hip-joint disease. In cases of this kind one eye is alone affected. The surgeon finds a number of yellowish nodules in or about the central region of the fundus. These increase both in size and number, coalesce, and thus form a raised, ill-defined mass, which lies behind the retinal vessels. The prominence is not infrequently dotted over with small collections of pigment. Supposing the patient to survive, such a mass may later either continue to grow, perforate the eyeball, and induce *phthisis bulbi*, or become absorbed.

When the latter event takes place, the fundus shows, of course, permanent changes at the spot where the mass lay. There are good reasons for believing that the ophthalmoscopic picture thereby produced is in many instances sufficiently definite to allow its cause to be identified at a glance. The appearances are well shown in the accompanying pictures, which were taken from children at the Ophthalmic School. The resemblance between them can scarcely escape notice. To my mind, they represent a definite type, the recognition of which is important no less to the general physician than to the ophthalmic surgeon.

CASE 1. Albert F., 4 years of age, was a child of strumous appearance; his glands were swollen, and he had a pustular eruption about the head and face.

The ophthalmoscopic examination of his left eye showed an egg-shaped patch to be present in the central region of the fundus. Its long axis was horizontal, its color greyish-white, and its surface was depressed slightly below the level of the surrounding parts. Its border was outlined by pigment, some of which invaded the patch itself. As shown by Figure 1, the fundus in its immediate neighborhood was of a pale orange hue, with a few small pigment spots flecked about it. The transverse measurement of the entire area was about equal to the vertical diameter of the optic disc. The retinal vessels were normal, and the fundus showed no other pathological changes. The right eye was free from disease.*

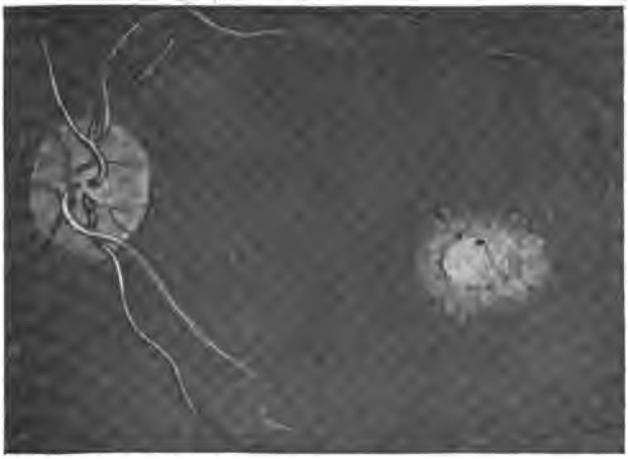


Fig. 1. Obsolescent Tubercle of the Choroid.

The patient remained under observation for two and a half years. During that time his general health improved, but the eye lesion manifested no material change.

CASE 2. John S., 4 years of age, came under notice on March 11th, 1890. He was of distinctly strumous temperament as evidenced a swollen upper lip, emaciation, enlarged glands, discharging nostril, and a pustular eruption about the nose and ears.

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*Mr. C. A. Morton, has described pigment-rings upon the surface of choroidal tubercles (BRITISH MEDICAL JOURNAL, June 4th, 1892).

As shown by Figure 2, his left eye contained a large patch of disease. It lay between the optic disc and the yellow spot region of the fundus, and its outer part encroached upon the latter. Roughly speaking, it was of quadrangular shape. A small mass of pigment formed the centre of the figure, and this was surrounded at some distance by a ring of pigment, the intervening area having a greenish-grey hue. As in the former case, the neighboring fundus had a pale orange color, with speckles of pigment about its margin. Some small retinal vessels crossed various parts of the affected area without losing their definition. No further pathological changes were to be found in the fundus. The right eye was normal.

This patient was seen by me the other day. His health has improved, although even now he suffers from relapsing pustular impetigo of the scalp. As to the left eye, the central part of the affected area has become more pigmented than was formerly the case, but there is no further change.

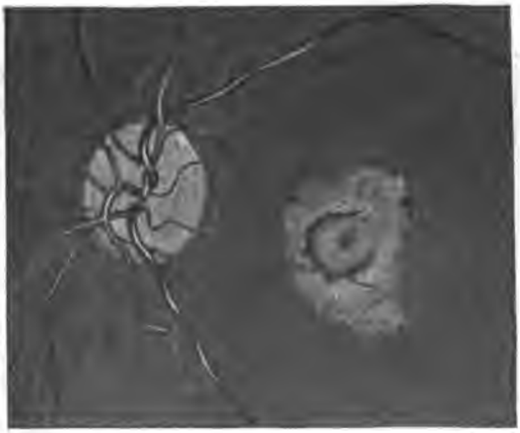


Fig. 2. Obsolescent Tubercle of the Choroid.

There are three points, then, in which the foregoing cases agree: (1) That the diseased spot essentially consists of a central atrophic area, enclosed by a pigmented figure, and surrounded by a zone of altered choroid; (2) that it is of large size and lies in the central region of the fundus; and (3) that it is present in one eye alone. To these must be added the fact that each patient was markedly strumous.

To judge from my own experience, I should say that this condition of the fundus is not a common one. I have often failed to find it in those with chronic tuberculous lesions. At the same time, it has, when present, important practical bearings. It may, for instance, furnish the physician with evidence as to the former existence of tubercle, even when the patient appears to be free from tuberculous changes in other parts of his body.

PRACTICAL NOTES.

A Pleasant, Alkaline and Cleansing Lotion.—A small addition of sugar increases the solubility of borax. It is used in the following powder for this reason, and also because it makes a more agreeable compound and assists in separating the other ingredients:—

℞ Sod. Biborat. ℥ss
Sod. Bicarb. ℥ss.
Potass. Chlorat. ℥ss.
Sacch. Alb. ℥ss.

Ft. pulv.—S. A teaspoonful to be dissolved in half a tumbler of tepid water.

This forms a pleasant, cleansing, and alkaline lotion, which can be used as a gargle or as a nasal douche. The powder can be kept made up in packets in a portable form, and the lotion prepared freshly as required.—*Practitioner*, 1895, liv, 189.

Dry Seborrhea of the Scalp. *Beta-naphthol*, 0.30 gramme (4½ grains); *camphor*, *resorcin*, each 0.20 gramme (3 grains); *sulphur precipitate*, 3 grammes (46 grains); *pure vaselin*, 20 grammes (5 drachms). Use as an ointment twice a week, removing any excess with a handkerchief. Next morning clean the head with a little *petroleum ether*, or, if too irritating, use the following: *Liquid ammonia*, 10 grammes (2½ fluidrachms); *rum*, 40 grammes (1¼ fluidounces); *tincture of quinine*, *tincture of rosemary*, each 30 grammes (1 fluidounce); *walnut-leaf infusion*, 200 grammes (6½ fluidounces). If the seborrhea is very oily, apply the following lotion three times a week; *Sulphur*, 25 grammes (6½ drachms); *camphorated alcohol*, 50 grammes (1½ fluidounces); *pure glycerin*, 5 grammes (1¼ fluidrachms); *distilled water*, 200 grammes (6½ fluidounces.—Brocq, *Jour. de Méd et de Chir. prat.*—*Universal M. J.*, 1895, ix, 348.

Curious Artificial Respiration. Dr. Berthold Beer recommends that the mucous membrane of the lips of the mouth be rubbed slowly with a piece of ice, the rhythm of the motion corresponding as nearly as possible to that of normal respiration. He claims that the inevitable result of the treatment is the return of respiration, at first in a very pronounced form, but becoming, on the continued application of the ice, very regular, quiet and deep. Ice used in this way has also a general sedative effect, and its quieting action has been successfully turned to account in the treatment of cerebral troubles. Dr. Foges has obtained equally favorable results with this treatment in cases of suffocation. This method may be employed for several hours at a time, and is said to be harmless for the patient and easy for the physician. — *Science News*, 1895, xxix, 183.

For Rickets.

℞

Phosphorus, ...	gr. 2-13.
Saccharin	gr. lxxvii.
Essence Lemon . . .	♏ ii.
Cod Liver Oil	℥ iiiss.

M. S. Dose, one teaspoonful.—Guinon, *Med. Rec.* 1895, xlvii., 218.

Preservation of Ointments, Fat, etc. To prevent fats of all description from becoming rancid, the *Rundschau* recommends the addition of a small amount of nitric ether, or a concentrated solution of sodium thio-sulphate.—*National Druggist*, 1895, xxv, 335.

For Chronic Malnutrition.—In a case of chronic malnutrition of probably rachitic origin in an infant, Dr. Davis recently recommended the following as a substitute for cod liver oil: *glycerine*, one fluidounce; *yolk* of one egg; *olive oil*, two fluidounces. Mix and make an emulsion and add *creosote*, one-half minim to each fluidram. Dose—a teaspoonful four times a day after each meal.—*Phila. Polyclinic*, 1895, iv, 509.

Differentiation Between Acetanilid, Phenacetin and Antipyrin.—On heating with zinc chloride in a test tube, acetanilid gives off a vapor with an aromatic odor, phenacetin a vapor with a sharp biting odor (acetic acid), and antipyrin gives off an odor resembling that of carbon disulphide.—*Am. Druggist*, 1895, xxvii, 372.

Tape-Worm Remedy. Dr. Edward Kraus, pediatrist, of Vienna, highly extols the following mixture against tape-worm especially in childhood:

Ethereal extract of green male fern,	grs. xx—xxx
Extract pomegranate, - -	ʒi—iss
Electuary lenitive, - - -	ʒi—iss

Mix. Give the whole in the course of two or two and one-half hours, at intervals of fifteen minutes, *i. e.*, divide in eight or ten doses and give a dose every quarter of an hour until all are taken. Kraus's method is as follows: The child is fed for a day or two previously on soups, broths, milk or other liquid foods, and the night previous to the exhibition of the remedy the lower bowel is washed out with a copious enema of tepid water. The next morning no breakfast is given, or merely a cup of tea, in fifteen minutes after which the first dose of the remedy is given. The child must be kept as quietly as possible, preferably in bed, and if in spite of this precaution there is a tendency to vomit, give a little sweetened lemon juice or a peppermint drop which will usually check the nausea of little children. Larger ones, or adults, may take coffee, strong and black. The dose is about the size of a hazel-nut, but dissolves easily in a mouthful of lemon juice and sugar, which disguises the taste. The remedy is said to be certain, and to bring the worm away completely.—*Nat. Druggist*, 1895, xxv, 338.

Ichthyol in Burns. In burns of the first degree Dr. Leistikow has recourse to applications of the following powder:

Zinc Oxide	5 parts
Magnesium Carbonate	10 parts
Ichthyol	1 to 2 parts

In burns of the second degree he applies the following paste:

Zinc Oxide	5 parts
Prepared Chalk	10 parts
Starch	10 parts
Linseed Oil	10 parts
Limewater	10 parts
Ichthyol	1 to 3 parts

The applications of the powder and of the paste are renewed once a day.

When inflammation is intense the two preparations may be employed simultaneously, the burn being first covered with a layer of powder, and the paste applied over this.—*Sem. méd.*, 1895, xv, 487,—*Am. M. & S. Bull.*, 1896, ix, 33.

Bismuth Subnitrate and Calumba in Acute Gastro-Enteritis of Children. E. Trabandt (*Sem méd.*, 1895, xv, 230) has found that in acute affections of the digestive tract occurring in children, bismuth is especially efficacious when administered in infusion of calumba root. The formula he recommends is the following:

Calumba Root	1 gme.
Boiling Water	75 gme

Infuse, strain, and add:

Bismuth Subnitrate	3 gme.
Syrup Orange-flowers	15 gme.

Shake well! Teaspoonful every two hours.

Under the influence of this medication, the author asserts, the vomiting stops after one or two doses have been taken, and the diarrhea is controlled within twelve to twenty-four hours. *Am. M. & S. Bull.*, 1896, ix, 19.

EDITORIAL.

THE ROLE PLAYED BY INFECTION.

IN THE causation of nervous disease, the role played by infection is more striking and apparent as these diseases appear in children than when they present themselves in adult life. A decade past scarcely a disease which belongs exclusively to the nervous system, with the exception of cerebro spinal meningitis, was looked upon as of infectious origin. But to-day the list includes a great number of all the important organic diseases of the brain, the cord, and the peripheral nerves, to which a child is subject. To take a few examples: No more distressing picture can be called up than that of a beautiful, healthy child suddenly stricken with anterior poliomyelitis, a disease which, while not inimical to life, is in a vast majority of cases an obstacle to the future usefulness and enjoyment of life.

In the majority of the text-books of to-day, even of those which are supposed to be "fin de siecle," the etiological factors still attribute this disease to exposure, to cold, trauma, previous acute diseases, and that very indefinite something, the neuropathic predisposition. All this in face of the fact, that the most trustworthy and careful observations have placed beyond cavil the occurrence of the disease, not alone epidemically, but endemically. The experience of Mendin, of Stockholm, which has been recently so fully corroborated by Caverly in our own country, shows that there can now be no doubt that the disease occurs not only under auspices exactly similar to the other infectious diseases but pursues a strictly analogous course.

Certainly the microbe which causes the disease or the infectious process at the bottom of the condition, has not yet been isolated, and desirous as that may be, it in no way detracts from the convincing evidence which we have in hand.

As the successful treatment of infectious disease keeps pace and goes hand in hand with our knowledge of its causation,it behooves practitioners who are in a position to see most of this disease, to spare no effort to discover the actual causation of each case or each epidemic as it shows itself, with the assurance that when the real, absolute cause of the disease is discovered, its treatment, that is its prevention, will be forthcoming.

A second example is that of polyneuritis,occurring in infancy. No stigma is cast upon the diagnostic perspicacity of the profession when we say that until very recently most of the cases of this disease have been considered somewhat unconforming of anterior polio-myelitis, in fact, cases of polyneuritis have been considered so very uncommon in children, that the occurrence in an individual case has been thought of sufficient interest to prompt reporting it as a clinical rarity. The experience of neurologists, however, has taught them not to share this opinion.

Recently, Hammond has recorded a number of cases which occurred epidemically in the City of Bridgeport. Like other epidemics the disease could be traced to a certain *locus*. Each case had a more or less definite period of incubation, which was followed by a brusque appearance of the symptoms, and a rapid course of the disease. Although in these cases no extensive microscopical examination was made to discover a specific microbe, Dr. Lynch, in whose practice many of the cases occurred, was able to detect in one instance pathogenic organisms. For a long time cases of neuritis have been known to develop with malaria, and since the discovery of Lavran of the micro-organism of malaria, the genesis of these cases has been more explicable.

There is a class of diseases to which, as yet, the pediatric physician has apparently not had his attention specifically called, namely, acute inflammation of the brain substance. In these the role played by infection will, undoubtedly, be found to be a most important one. The experience of physicians during the last two epidemics of "La Grippe," has not yet entirely come to light; the more we get of it, however, the more do we see that the late and malign results of this disease are manifested particularly in the central nervous system. The number of acute cases of encephalitis, a good proportion of which terminate in recovery, published by Oppenheim, Leichtenstern and Bucklers, is in evidence, not to mention the cases of polio-encephalitis superior, which Wernicke and his followers considered to be dependent upon a single cause, alcoholism, but which have been proven beyond a doubt to be the sequelæ in a considerable number of cases of influenza, that this infection produces changes in the brain substance which deserve serious study.

Perhaps one of the most fertile fields for observation of the pediatric physician to-day, who studies nervous diseases is in the differentiation between inflammation of brain membranes and of the cortical substance. Up to the present date the latter have been scarcely considered. Their study, differentiation and classification will mark a most important advance in the comprehension of acute inflammatory nervous diseases of children.

JOSEPH COLLINS, M.D.,
NEW YORK.

Bicarbonate of Soda for Ordinary Colds. Dr. L. Duncan Bulkley strongly recommends the use of bicarbonate of soda in the treatment of ordinary colds. He gives 20 to 30 grains dissolved in two ounces of water every half hour for four doses. If this does not relieve the symptoms, he waits two to four hours and gives another four doses in the same manner. It is rarely necessary to repeat this more than once or twice.

Bromides as Tenifuges. J. Frank (*Wein med. Presse*, 1895, xxxvi, 1797) reports a case in which sodium bromide unexpectedly acted as a powerful tenifuge. The case was that of a young, robust girl, in whom violent eclamptic attacks suddenly set in, and recurred at irregular intervals for about ten days. This case remained obscure until the patient passed several yards of tapeworm, after which event the attacks ceased. Dr. F., is inclined to think that the expulsion of the tapeworm was the effect of the sodium bromide, of which he has prescribed about fifteen to twenty gme (four to five dr).—*Am. M. & S. Bull.* 1896, ix, 19.

SOCIETY REPORT.

NEW YORK ACADEMY OF MEDICINE.

GENERAL MEETING, JAN. 2, 1896.

Infantile Intussusception. A Study of 103 Cases Treated Either by Intestinal Distention or Laparotomy. Dr. Frederick Holme Wiggin read a paper with this title. He said that although the two methods of treating intestinal intussusception, intestinal distention and abdominal section had been centuries old, the comparative merits of the two modes of treatment were still in dispute. His attention had been specially called to this subject by a case occurring in his own practice, and although that one had been treated successfully by intestinal distention, further study had shown him that it did not deserve to be considered *the* method of treatment. Nevertheless popular opinion, both in the profession and among the laity, seemed to be that intestinal distention was safe, and often successful, and moreover that it did not interfere with the subsequent performance of abdominal section, should this seem to be demanded. Laparotomy, on the other hand, was looked upon as almost invariably fatal when done for the relief of intussusception in infants of a year or under.

One of the first facts that impressed the author in beginning this study was the meagerness of American literature as compared with the contributions from England. As the bulk of the paper contained matter only intended for reference, only a few illustrative cases were cited, and deductions drawn from their consideration.

Dr. Williams has reported in the *Lancet* for 1894, a case of intussusception occurring in a male infant of eight months, coming under observation on the first day of acute illness. There was a history of intestinal derangement for one week previous. Examination showed great abdominal distention, and a tumor. Inversion combined with massage, enemata and inflation all failed to give relief, and it was then decided to try the effect of generating carbonic acid gas within the bowel. To this end a solution of a drachm and a half of citric acid in eight ounces of water was injected into the bowel, and quickly followed by two drachms of sodium bicarbonate dissolved in eight ounces of water. After holding together the nates for several minutes, it was found that the tumor had disappeared. Vomiting ceased, and a natural dejection from the bowel occurred two days later.

In a case of ileo-cecal intussusception in an infant of eight months, reported by Dr. F. Taylor and Mr. Golding Bird, examination showed the presence of an abdominal tumor. The child was seen on the first day of the disorder. The first attempt at inflation caused an apparent disappearance of the tumor but it returned some hours later. Under chloroform narcosis with an increased pressure, inflation was again tried, but without success, and the child died soon afterward. The necropsy showed the bowel still invaginated. The effect of forcible inflation with air was then tried, with negative result. By an injection of water, however, the ileum was reduced, leaving the colon still inverted. Examination showed that the colon was gangrenous, and that this enema had produced at several points rupture of the peritoneal and muscular coats of the bowel.

The next case of interest was one reported by Mr. Mortimer in 1891—an infant of eight months, coming under treatment on the fourth day of the disease. Examination under chloroform showed the presence of a tumor, but this examination produced collapse, and it was necessary to resort to stimulation before beginning treatment. After giving two enemata, consisting of about two ounces each, the tumor could no longer be felt. Opiates were then given. The tumor returned after two days, and again under chloroform, several larger enemata were administered under a pressure of three feet, but without producing more than a partial disappearance of the tumor. Two more enemata of a pint each were given at a lower pressure at intervals of a day, and a few hours after the second one, the infant died. The necropsy showed three ruptures in the descending colon.

Dr. Edward Deansley reported in the *Lancet* for 1894, a case of ileo-cecal intussusception in a female infant of seven months seen first five days after the protrusion of the bowel from the anus. The child had been sick for a month before this. On returning the bowel inside of the anus, the ordinary abdominal tumor became apparent. With the reservoir at a height of two feet above the patient, and the latter under an anesthetic, a pint of water was injected into the bowel, and the abdomen massaged. After this, the tumor could no longer be felt, and the bowels moved twice. On the following day, the child being quite drowsy, the opiate was discontinued, and that evening the vomiting returned, and the bowel once more protruded. At intervals of 24 hours it was twice reduced under chloroform, but the day after this second enema the child died. The necropsy not only showed the invagination still present, but demonstrated a very important fact, *i. e.*, that the reduction could have been readily effected by laparotomy.

Another instructive case has been reported by J. D. Mortimer in the *Lancet* for 1891. An infant of three months with intussusception was seen on the first day of the disorder, and was then vomiting and passing blood from the rectum. Rectal examination revealed a tumor. The tumor disappeared for some hours after the inflation of the bowel, and then with the return of the symptoms of intestinal obstruction, the child passed into a condition of collapse, in which it died. At the necropsy the invagination was found unreduced. Under a pressure of two feet, an attempt was made to reduce the invagination by an enema, and in a few minutes this was effected with the exception of one inch of the ileum, the cecum and appendix. Not much more reduction took place when the pressure was increased to three or four feet, and in four minutes the colon ruptured just below the intussusceptum. It was found that the invagination could be easily reduced by manipulation from below without apparently causing any damage. It was thought, however, that owing to the swelling of the valve, rupture would have occurred had complete reduction been effected.

In connection with this subject of the pressure to be employed in carrying out this method of intestinal distention, the author called attention to the experiments of Mr. Mole, made in 1894 on some cadavers. He found that when one and a half pints of water were injected into the bowel under a pressure of one and a half pounds to the square inch—an elevation of the water reservoir of three feet—the liquid passed through the ileo-cecal valve, and that air could also be made to pass this point. This experimenter concluded: (1) That no harm could be done healthy intestine by enemata of fluids under a moderate pressure: (2) that hydrostatic pressure was more uniform, and therefore, less likely to cause rupture of the bowel; and (3) that over-distention was most likely to cause rupture of the transverse colon.

A rather remarkable case has been reported by Mr. Edmund Owen in the *British Medical Journal* for 1885. The patient was a female infant who developed an intussusception on the day of its birth, and who came under observation on the second. At this time under chloroform an enema was given, but with negative result, and the enema was repeated with like result on the succeeding day. Laparotomy was then done, and the first piece of small intestine presenting in the wound was seized, and an artificial anus established. No attempt was made to find the invaginated portion. The child lived six days, dying when nine days old.

In considering the foregoing cases, the author said that out of the 103 cases forming the basis of the paper, nearly fifty per cent. had occurred in the fourth, fifth and six months in about equal proportions, and in 89 per cent. the intussusception had been of the ileo-cecal variety. An interesting point in the etiology was the possible influence of external violence. Pritchard had called attention to the probable effect of carelessly carrying infants doubled up over the nurse's arm, and Jacobi had pointed out that the violent jumping up and down of fretful infants was a not unlikely cause of intussusception. There had been nothing unusual about the symptomatology of the cases reported in the paper. Tenesmus had not been marked except in those cases in which the gut protruded from the anus—about five per cent. of the cases—or where the tumor was low down in the rectum. Cure by sloughing had only been met with twice. It was important to note that several observers had stated that unless *conjoined* abdominal and rectal palpation were resorted to, one might often overlook the presence of the characteristic abdominal tumor.

Of the 39 cases treated by intestinal distention, 23, or 59 per cent. were fatal. In the 16 successful cases, the average hour of beginning the treatment was the forty-first from the onset; in the fatal ones; it was the sixty-ninth. In one case, nine enemata were required to produce a permanent reduction of the invagination; in another, while the infant was under chloroform and inverted, it vomited and inspired the vomited matter, thus causing its death. In all the cases in this group there was the history of partial or temporary reduction, of uncertainty as to the result, and the necessity of repeating the treatment, and all the necropsies showed gangrenous and invaginated bowel, and lacerations of the intestine. Counting the cases also in which intestinal distention was practiced, but laparotomy was subsequently performed, the total number was 72. Of this number, the invagination could not be reduced in 54, or in 75 per cent. This would have representedthe mortality of this method of treatment had not other means afterwards been tried.

Battery and Mole, the speaker said, had shown by their experiments that when there was no obstruction, water under a moderate pressure could be made to pass the ileo-cecal valve, and Mole had proved that one pint and a half of water injected under a pressure of one and one-third pounds to the square inch into an infantile colon would fully distend it, and would pass the valve. Although he would not now advocate a resort to intestinal distention in the treatment of infantile intussusception, those who desired to try this treatment should remember that the best plan was to inject one and a half pints of tepid saline solution under a pressure of three feet, and if this first enema were not successful in reducing the intussusception, resort should be had at once to laparotomy. If it were apparently successful, then he would advise keeping the child by other methods than motion and the use of opiates, for the former might excite a return of the intussusception, and the latter would be apt to mask the symptoms of intestinal obstruction should the invagination recur, and thus valuable time be lost. It should also be remembered that there is always a lull of a few hours after practicing intestinal distention, whether the method proves successful or not. The chief advantage of this method had been aptly stated by Mr. Mortimer to be "the slight parental opposition to its employment." Dr. Charles K. Briddon, of New York, had recently characterized the use of enemata in these cases as "simply trifling with a very grave condition, only to be combated by the institution of radical measures at the outset." Mr. Bryant had expressed it as his opinion that intestinal distention was always dangerous, and was "only justifiable within the first three days, and in cases not presenting symptoms of acute strangulation.

The author next considered the result of laparotomy in the treatment of the cases studied by him. Of the 64 cases so treated, 43, or 67.2 per cent. were fatal. In the 21 successful cases the average age was 6½ months, and the average hour of beginning this treatment, the forty-fourth from the onset of acute symptoms. In the fatal cases, the average age was five months, and the average hour, the one hundred and second. If the cases in which the operation was abandoned, and those in which the bowel was incised, or exsected were excluded, the result would be 45 cases with 24 deaths, or a mortality of 53.4 per cent. If in addition to this exclusion, we considered only cases occurring since 1889, or since the modern improved technique in intestinal surgery was generally practiced, there would be 18 cases with 4 deaths, or a mortality of 22.2 per cent. This, he thought, was a fair estimate of the risk of the operation at the present time, provided it were undertaken within the first forty-eight hours. In his opinion the best method of reducing the invagination was to encircle the tumor below its apex with the finger and thumb while the intussuscipiens or sheath was held a few inches lower down and the apex of the tumor pushed upward. Traction from above should be avoided. So far as he knew, there was no case on record in which the invagination had proved irreducible after laparotomy, but in the event of such a serious complication, he would recommend as the best method of dealing with it, that devised by the late Professor H. Widenham Maunsell. But such a condition should never be met with; it is the result of unpardonable delay.

In closing, the author expressed the hope that his study of this large number of cases might be the means of convincing both the profession and the laity that an acute intussusception was after all only a form of strangulated hernia, that the subacute variety was in effect an irreducible hernia, and that while intestinal distention was always uncertain, unreliable, and not especially free from danger, laparotomy if done within the first forty-eight hours should yield at the present time 78 per cent. of recoveries.

Dr. A. Jacobi said that many cases of intussusception were not published, and hence it was only from the statistics of cases actually operated upon that we could compute the mortality. He had long been of the opinion that a large proportion of these cases were preventable, for many of them gave a previous history of long-standing constipation or diarrhea. The constipation by causing severe straining might lead to intussusception, and chronic diarrhea by producing a thickening and stiffening of the deeper tissues of the bowel might lead to the same condition. He thought that in using intestinal distention, the best results would be obtained from injecting the fluid under a pressure of not more than one foot or one foot and a half, as in this way danger of injuring the bowel was avoided, and more fluid could be made to enter. If not successful, however, this treatment should give way within a very few hours to abdominal section. He had always been in the habit of giving opium to infants after the reduction of the intussusception, and he felt that this tended to prevent a recurrence of the trouble by keeping the child quiet.

Dr. B. Farquhar Curtis said that in 1887 he had collected some statistics, from which he had found that the mortality from operations for intussusception in both infants and adults, was 76 per cent. Additional statistics had more recently cut this down to 58 per cent., and this improvement he attributed not to any great change in technique, but to an earlier resort to operation. He doubted very much if the mortality now was only 22 per cent. It was well to have both surgeon and physician see these cases of infantile intussusception from the outset as by such joint observation the case could be much more intelligently treated. In cases having a very acute onset, laparotomy should be done at once without wasting precious time in trying intestinal distention. But it should not be understood that no relapses followed laparotomy; a number of such recurrences had been recorded. Where injections were employed, the "head" of water should not exceed three feet, they should be given with the patient anesthetized, and not more than a pint of fluid should be injected at one time. Between each injection the operator should carefully search for the tumor and determine whether or not there had been any reduction. In performing laparotomy in infants, a very small incision was sufficient; the operation should be done speedily; the intussusception should be reduced within the abdomen; and every precaution should be taken to preserve the body heat.

Dr. J. Lewis Smith said that one should be able to differentiate between dysentery and intussusception within thirty-six or forty-eight hours. In the former the stools contained some fecal matter in addition to blood and mucus, but in intussusception there is an entire absence of fecal matter after the first few hours. In his experience with intussusception among children between six and twelve months old, there had not often been a history of long-continued illness, such as diarrhea.

Dr. R. Van Santvoord said that as some considered that the ordinary colic of infancy was due to slight and recurrent intussusceptions, the importance of coutrolling the violent action of the bowel in such cases by opiates or similar means was apparent.

Dr. Wiggin, in closing the discussion, said that the serious results of delay were well shown by a comparison of the stages at which the successful and unsuccessful cases were subjected to treatment, whether that was by intestinal distention or by laparotomy. An incision of one and a half to two inches was ample, and the invagination should be reduced within the abdomen. He did not believe that in infants, at least, a recurrence of the invagination after laparotomy was at all common.

BOOK REVIEW.

Therapeutics of Infancy and Childhood. By A. Jacobi, M.D., *Clinical Professor of the Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York.* 518 pages. (Phila., J. B. Lippincott Company, 1896.)

THE author aims to give a compact picture of the therapeutics of infancy and childhood; and every general practitioner should obtain this valuable contribution to pediatrics.

A large part of the work is devoted to diet and hygiene, but a good deal is also given to the consideration of the action of medicines, for Jacobi believes in medicines when employed with skill and experience. Particular pains are taken to offer clear, though brief, statements of differential diagnoses, and in view of what is included in the frame of this volume, it might claim the name of text-book.

NEW BOOKS.

Mentally Deficient Children: Their Treatment and Training. By G. E. Shuttleworth, B. A., M. D., *Late Medical Superintendent, Royal Albert Asylum, for Idiots and Imbeciles of the Northern Counties, Lancaster, etc.* Six plates and five illustrations in the text. 140 pages. (London, H. K. Lewis, 1895.)

Die Diphtherie, ihr Wesen, Ursache und Bekämpfung mit Berücksichtigung der Therapie, insbesondere der Serumtherapie (Antitoxin-Behandlung). Von Dr. Bruno Schürmayer, *Hannover.*131 pages. (Lepzig, B. Konegen, 1895.)

Studien über Klinik und Pathologie der Idiotie nebst untersuchungen uber die Normale Anatomie der Hirnrinde. Von Dr. Carl Hammarberg. Seven plates, 127 pages. (Upsala. Edv. Berling, 1895.)

ABSTRACTS.

CHRONIC ALCOHOLISM IN A SIX YEAR OLD CHILD.

Coulon (*La Medecine Infantile*, 1895, ii, 638) reports the case; the child, a girl, was born when the mother was 48 years old, and the family history was alcoholic. She was brought up on the bottle and at the age of four years was put out to board for 18 months. During this time she was taught to take coffee, wine and cognac regularly. On her return home she was found to be emaciated, without appetite and subject to frequent daily attacks of vomiting and to constant abdominal pains, sometimes of extreme intensity. Immediately, alcohol was almost entirely stopped and certain nervous symptoms developed which resembled delirum tremens, fits of anger, agitation, profuse sweating, attacks of unconsciousness and again of unreasoning fear.

There was also a persistent diarrhea associated with tenesmus. Dilatation of the stomach was present but no other organic changes could be detected.

TWO CASES OF DIPHTHERIA TREATED BY SERUM AND FOLLOWED BY DEATH.

Poussard (*La Medecine Infantile*, 1895, ii, 634) reports two cases. One, 2½ years old with naso-pharyngeal disease received 20 c. c. on the second day and 10 c. c. five hours before death which took place on the third day. The second, also 2½ years old with naso-pharyngeal affection received 20 c. c. on the third day and 10 c. c. more on the following day. The membrane disappeared entirely but the child died three days later of meningitis.

NOTES ON THE PATHOGENIC FORMS AND SURGICAL TREATMENT OF HYDROCEPHALUS.

D'Astros (*La Medecine Infantile*, 1895, ii, 603) points out that in congenital hydrocephalus accompanied as it usually is by malformation of the brain, surgical treatment is useless.

In hydrocephalus due to intra-ventricular changes brought on by hereditary syphilis puncture may afford relief during the curative action of specific treatment. In hydrocephalus due to cerebellar tumors puncture is useless. Hydrocephalus may also be internal, taking its origin in a lesion of the striate nucleus, or external, starting in a hemorrhagic meningitis; clinically the two cannot easily be differentiated, but examination of the fluid in the former case shows that it is characterized by a small amount of albumin and a large amount of sodium chloride.

In all cases, therefore, in which the origin of the fluid is uncertain, the author recommends exploratory aspiration and analysis of the fluid withdrawn; if the fluid is thus shown to come from the ventricles, operation is contra-indicated; if from the subdural space, operation is indicated.

NEW INTUBATION APPARATUS.

Egidi (*La Medecine Infantile*, 1895, ii, 631) describes certain modifications in O'Dwyer's apparatus.

1. The obturators and introducer are made tubular in order that the air may pass through them during the introduction and by the sound of the passage show that the tube is in the right place.
2. One instrument serves for introducer and extractor, the jaws being closed when introduction is performed.
3, The sliding gear used to detach the tube when the latter is in the larynx is omitted and the tube is required to be held in position by the finger of the one intubating.

THE TREATMENT OF PERITYPHLITIS IN INFANCY.

Arthur Schlossmann, of Dresden, (*Munch. Med. Woch.-Am. Gyn. and Obstet. J.*, 1895, vii, 689) while admitting that the general outline of the treatment of perityphlitis in infancy differs little from that of the adult, asserts that the general course of the disease and the effect of therapeutic measures is worthy of consideration. At the present time much interest has been directed to this disease because of the active surgical procedures that have been advised for its relief. From time to time cases come under observation that have done badly through medical treatment. Recently Schafer reported a case from Saltmann's clinic in which he justly thinks that perforation of the processus vermiformis, as well as the secondary breaking through of the abscess into the abdominal cavity, was caused by the purgatives and enemata given prior to his admission to the hospital. The author has observed a case in a boy of five years and a half to whom had been given ten doses of calomel of one-tenth of a gramme to relieve the existing constipation.

An early diagnosis is essential. If the symptoms are well pronounced this is easily done, but frequently the premonitory signs are difficult of interpretation. Anorexia, vague pains in the abdomen, vomiting, mild diarrhea or constipation, with slight rise of temperature, may be observed in cases with mild invasion. According to Matterstock, in about thirty per cent. of cases the invasion may be called subacute. In these cases careful abdominal palpation will generally give some information. In all cases presenting indefinite gastric symptoms our attention should be directed to the iliac fossa. If palpation in that region causes increase of pain, or a suspicious resistance be felt, then great caution should be taken in the treatment of the case. In those infants who offer resistance to examination by crying and rendering tense the layers of the abdominal wall the difficulties of diagnosis are considerably augmented.

If perityphlitis be present or is suspected, the intestines should be kept as quiet as possible in the hope of arresting the inflammatory process and of aiding the formation of firm adhesions, thus forming a local abscess instead of causing a general peritonitis.

In childhood necrosis and gangrene of the vermiform appendix occur more frequently and with more rapidity than in adults, as is pointed out by Matterstock and Parker. For fear of causing paralysis of the intestine or inflammation in the attempts to remove the fecal masses, the use of purgatives and enemata should be prohibited. Opium is indicated. Opinions differ as to the dose that is necessary to quiet the intestines. Because of the well-known susceptibility of children to opium it should be given with great caution, and yet it is necessary in this disease to give doses approximating the toxic limit. It is singular that in inflamed and irritated conditions of the peritoneum opium is well tolerated. The author has been unable to find any record of a case of perityphlitis where alarming symptoms have been produced by opium. It should be given until the pain is removed and the child is upon the verge of narcosis. This is the more important because the child is apt to be very restless, and will do itself harm. The fear that harm might come from the obstinate constipation induced by opium is unjustified, because stools often occur suddenly notwithstanding the administration of opium, and if this does not occur constipation lasting several days is not dangerous. If vomiting occurs, the treatment is much more difficult. The medicine may be given with ice or with the addition of a drop of the oil of peppermint. If these means fail, the subcutaneous injection of morphine has been recommended, but with this method the danger is greater and it is not so efficacious as the administration of opium.

Absolute rest must be enforced and cold applications applied. In order to further prevent peristalsis all food has been withheld, but experience teaches us that children waste very rapidly, and as it is necessary to preserve their strength, especially in the event of an operation, this does not commend itself to us. Nourishment should be given in a concentrated fluid form, and in small repeated doses. In these cases alcoholic stimulants should be withheld because of their tendency to increase peristalsis.

At the last Congress for Internal Medicine all agreed that the *ultima ratio* was a surgical procedure, but as to when the knife should be employed there was difference of opinion. In view of the rapid course run by perityphlitis in infancy, the author is inclined to the early operation.

SHALL WE CONTINUE TO STERILIZE MILK FOR INFANTS?

Dr. Benjamin Lee (Letter to the *Journ. Am. Med. Assc.*, 1895, xxv, 1145) says that we are too much in danger at the present time of forgetting that there are other causes of disease than micro-organisms. The possibility that the exclusive use of sterilized milk as a food for infants, while it would avoid the dangers arising from the occasional presence of the bacteria of typhoid fever, tuberculosis and other infections, may prove a serious obstacle to assimilation and nutrition, and thus lead to the development of rachitis, scurvy and other allied conditions of mal-nutrition, was pointed out by him in a paper read before the meeting of the American Orthopedic Association, at Washington, D. C., May 30, 1894, on the subject of rachitis.

Prof. A. Jacobi, in the leading article of PEDIATRICS, for January 1st, 1896, in which he reviews the question of infant feeding at length, while urging the importance of the sterilization of milk in the strongest possible terms, yet calls attention to the fact that "sterilization has been claimed to be no unmixed boon because of its changing the chemical constituents of milk."

In speaking of the method of Dr. Rotch, which consists in sterilization, mechanical separation in order to remove impurities, and remixture of the milk and cream, he says: "I know of a number of babies who in health and disease have done well on the protracted use of the laboratory milk. Only one observation struck me in a few cases. The formation of the muscles and part of the bones appeared to be slow, the teeth came a number of weeks or even months too late, the cranial bones turned slightly soft in a few instances. In a few such cases I had to add animal broths or juice before the usual time; in one I tried phosphates (elixir phosphori), which was rejected, in others it was well borne and useful."

Jacobi in a foot-note ventures the prediction that "before long more than to-day cereals must be given to make teeth when milk food alone does not suffice for their development."

His own advice to mothers unfortunately compelled to nourish their infants artificially, if they are able to obtain pure milk, from cows of authenticated good health, and from dairies where proper sanitary precautions are known to be taken, and are able to use the milk within twelve hours after milking and after very limited transportation, is that they should keep the milk in hermetically sealed jars and in a cool temperature, but should not subject it to Pasteurization, sterilization or boiling. Under other conditions namely those of protracted transportation, prolonged exposure to high temperature, ignorance of the conditions of health of the cow or of cleanliness of the dairy, they should resort to boiling in preference to sterilization or Pasteurization. It is possible that the boiled milk will tend somewhat more to induce constipation than will the sterilized milk, but this is a trifling objection which can easily be met.

NOTES ON FIFTY-TWO CASES OF HEREDITARY SYPHILIS.

Moussons (*La Medecine Infantile*, 1895, ii, 610) reports in detail certain rare manifestations in a large number of cases of hereditary syphilis. He notes that he has never seen in this class of cases a roseola; pemphigus, which is usually present at birth, appeared in one case first on the fifth day; the annular form of the maculo-papular syphilide was seen twice and the so-called palmar and plantar psoriasis once; gumma of the skin, an extremely rare lesion, appeared as small, hard, slightly elevated, indolent masses of a violet color which ulcerated and left permanent cicatrices. They were found chiefly on the buttocks, thighs and legs. A variety of alopecia evident as retarded growth of normal hair was frequent. Coryza was a symptom in every case. In one child scars of old fissures completely encircled the mouth making a real stenosis. Usually scars were found only at the angles of the mouth.

Swollen glands were not rare but appeared when there was a local lesion in the neighborhood. Parrot's pseudo-paralysis was noted twice and in spite of the well-known gravity of the affection both cases responded well to treatment. The author declares that he has not yet observed a single example of Hutchinson's teeth and apparently doubts their significance. Among visceral lesions he has found enlargement of the liver in two cases, and orchitis in three. He also reports one case of albuminuria which he thinks due to some undetermined syphilitic change in the kidney. One case of syphilitic laryngitis with threatened stenosis was interesting on account of the rarity of that lesion in the hereditary form.

In conclusion, the author insists on the necessity of energetic and rapid treatment, speaks highly of inunctions, and considers nurishment at the mother's breast as of the highest importance.

NEPHRITIS AS A COMPLICATION OF INTESTINAL CATARRH IN INFANTS.

Seibert (*N. Y. Med. Monatsch'f't.*, 1895, vii, 405) calls attention to the frequency of nephritis as a complication of intestinal catarrh in infants. He found that in all the cases observed by him, when fever was present longer than three days, the urine contained albumin.

The author goes on to give, in a rather interesting way, the symptomatology and treatment, but brings, with the above exception, nothing new.

ATTACKS OF STRIDULOUS LARYNGITIS COINCIDING EXACTLY WITH THE APPEARANCE OF CERTAIN TEETH.

Coulon (*La Medecine Infantile*, 1895, ii, 643) reports that three to seven days before the appearance of the first tooth, at eight months, of the inferior canines at nineteen months and of the last molars at twenty-four months, there were attacks of false croup coming on in the middle of the night and lasting a few hours. Constipation followed by diarrhea also usually preceded by a few days the cutting of every tooth.

ABSCESS OF THE LIVER IN CHILDREN, WITH REPORT OF A CASE OF AMEBIC ABSCESS.

R. M. Slaughter (*Va. Med. Month.*, 1895, xxii, 722) reports a case of this rare disease in children and bases his article upon a study of the records of thirty-six reported cases. Thirty-four of these cases were collected and analyzed by Dr. Musser, and seem to have been all that he was able to find in the available medical literature of German, French, English, and American writers. Since the publication of Musser's article, two additional cases have been reported one by Monnier, in France; the other by Pereira, in India.

Of these thirty-six cases, nine occurred in Great Britain, twelve in Germany, seven in United States, which, with his own case, makes eight, four in France, two in India, and one each in Austria and Africa. It is remarkable that so few cases are reported from India, Africa, and other tropical regions, in which abscess of the liver is so common in adults.

The average age of occurrence was a little less than nine years. The youngest was an infant of one year; the oldest fifteen years old. Of the cases in which sex is given, thirty-six in number, twenty were boys and sixteen girls.

Causation.—Injury is the assigned cause in nine cases. In the majority of these it is by no means proven that the abscess was attributable to the injury. The next most frequently assigned cause is round worms, which have migrated from the intestine into the bile ducts, and there set up an inflammation. In five cases, the ascarides seem to have been the undoubted cause, as they were found, after death, in the abscess cavity or in the liver tissue. In the remaining cases the abscess was secondary to a pylephlebitis in four cases, to an umbilical phlebitis in one, to pyemia in two, to dysentery in three, to pelvic peritonitis, perityphlitis, malarial fever and tuberculosis of the lungs in one each.

Medical literature does not contain the record of a single case of abscess of the liver, in a child, which has been demonstrated to have been of amebic origin.

Amebic abscess of the liver is one in which the destruction of the liver tissue and the formation of the abscess is due to the *Ameba coli*, a low form of animal parasite. This parasite finds its way into the human body by way, most probably, of drinking water, and makes its habitat in the colon, where it produces a dysentery known as amebic, in contradistinction to the ordinary catarrhal dysentery. From the colon the amebae migrate into the liver or lung, or both and set up abscesses.

The history of his case is as follows: B. R., aged seven years, a frail colored boy, had, during the latter part of September, 1894, a slight attack of dysentery. Upon his return home he complained of diarrhea and loss of appetite, from which he rapidly recovered after taking calomel followed by castor oil and a tonic. Three months later he had an attack which resembled varicella, and ten days after the onset of this cutaneous eruption he began to complain of abdominal pain. There was no marked tenderness on pressure, but the tongue was coated and there was fever.

For the next ten days, there was a steady increase in the severity of his symptoms. His temperature was always high—from 103° to 104°F. The pain increasing in severity, was soon referred to the hepatic region, and there was marked tenderness on pressure over the liver and right iliac fossa. So severe was the pain, that the child slept neither day nor night, except when under the influence of opiates, and, as a rule, colored children are little susceptible to pain. The bowels moved from three to five times in the twenty-four hours. Urine increased in quantity and in urates, otherwise normal. There was no jaundice. Pulse was quick, weak and small. Emaciation and loss of strength were very rapid.

The right lobe of the liver rapidly increased in size, so that, by the 28th, there was perceptible bulging of the ribs, and the lower border could be easily palpated beneath the ribs. On the 29th, fluctuation was apparent, and was most distinctly felt in the lumbar region. During the afternoon of that day, the abscess was aspirated and about six ounces of thick, viscid, chocolate-colored matter was withdrawn. Microscopic examination of this matter showed many red blood cells, some pus corpuscles, and amebae coli.

On the 2nd of February he opened the abscess. A quart or more of a greenish gray-colored matter, containing quite large masses of necrotic liver tissue, was discharged, and the cavity irrigated with one-half per cent. solution of formalin. A large drainage tube was inserted, and the dressings applied.

With the exception, however, that his temperature fell two or three degrees, and that he rested more comfortably, the patient did not improve. Two or three days before his death, the right parotid gland became tender and swollen, and an abscess threatened, but, up to the time of his death, no pus could be detected. Growing steadily weaker, he died on the night of the 7th of February.

The autopsy showed the liver enormously enlarged, the right lobe the seat of a large abscess. No healthy liver tissue. Left lobe studded throughout with small areas of necrotic tissue. Microscopic examination showed amebae in abundance, as well as characteristic degenerative changes described by Councilman and Lafleur.

EXCISION OF A TUBERCULAR ELBOW IN A CHILD.

Milliken (*N. Y. Med. Journ.*, 1895, lxii, 647) reports a case of tuberculous elbow in a child five years old, which had resulted in anchylosis and sinuses. An excision of the joint cured the disease and restored motion. From his experience he concludes: 1. Excision of the elbow for tuberculous disease complicated by anchylosis and sinuses, to be effective, must be complete. 2. The single posterior incision is preferable even in complicated cases. 3. When possible, the operation should be done subperiosteally, which gives a stronger joint, as all the ligaments are left intact and the subsequent hemorrhage is lessened. 4. Gentle passive motion at regular intervals is essential to the restoration of motion. 5. Cases of excision of the elbow should be under the surgeon's care for six months at least after operation to insure the best results.

THE AUSCULTATION OF JOINTS.

Sir Benjamin Ward Richardson, who has made a practical study of the subject, states that auscultation is quite as useful in joint affections as it is in affection of the lungs, but that it requires to be learned in its details before it can be fully applied. (*Asclepiad*, 3d quarter, 1894–5.) Joints that are healthy must be auscultated as well as joints that are diseased, and the latter, in turn, must be auscultated and learned according to the kind of diseased condition that may be present. Distinction must also be made between the sounds that arise from the friction of bones in their sockets and upon each other. For conducting this kind of examination the double stethoscope is the best, but he sometimes uses the simple differential stethoscope which consists of two single-mouthed tubes quite separate, the ear-pieces of which can be adapted to each ear. The mouth-piece should not be large—three-quarters of an inch in diameter is sufficient—and it is advisable to have the mouth-piece covered at its edge with India rubber, so as to avoid external friction. If the double stethoscope be not at hand the ordinary wooden instrument will suffice; but the advantage of the double one is that it enables the operator to manipulate the joint and bend it without the aid of an assistant, although the latter is alway of service.

When a joint is quite healthy and the person auscultated is young there is practically no sound or movement whatever. No sound will be heard, except a very gentle soft friction sound, if the movement be made in such a manner as to bring the end of the movable bone with some force into collision with the joint or bone that opposes it in the socket. When a sound is produced it may be called a cushioned sound, and it ceases the moment the action that produced it is slowly carried out without pressure. A very little derangement within the joint itself—less than a friction that produces impediment of motion, much less than an impediment that gives rise to pain—leads, however, to sounds that are distinguishable, the abnormal sounds increasing in degree as the impediment within the joint is intensified or modified. There are, at least, five modifications of joint sounds; they may be defined as: simple dry friction sound; dry grating sound; coarse grating sound; moist crepitant sound; and coarse crepitant sound. *Univers. M. J.*, 1895, ix, 314.

DEFECTIVE HEARING IN SCHOOL CHILDREN.

In an annotation the *Lancet* for Nov. 23rd, 1895, draws attention to passages on defective hearing in school children in Wehner's book on school hygiene. In the schools of Stuttgart, Weil found that 35% of the children had some defect of hearing and Moure among the school children of Bordeaux found 17% affected. The subject is of importance in every country, not only from the children's, but from a national point of view, and every one must agree with the *Lancet* in thinking that it furnishes an argument in favor of having Medical Inspectors who would examine the children with regard to defects in hearing and also in other matters such as ocular troubles and hygienic surroundings. Adenoid growths are responsible for the majority of aural diseases in children and the importance of treating them in an early stage cannot be over-estimated. Many troubles, besides defective hearing, can be directly traced in after life to adenoid growths all of which troubles could have been averted by a timely and simple operation in childhood. Otorrhea has not even yet been properly recognized as a menace to hearing and life by the general public, especially among the poorer classes. The appointment of Medical Inspectors for our Board Schools would be of the greatest benefit.

PSEUDO-LOBAR BRONCHO-PNEUMONIA; TREATMENT

Dr. G. Marfan (*Gazette méd. de Paris*, 1895, No. 41, p. 1895) who writes voluminously and well concerning the diseases of children, states that there are four indications to be filled in the treatment of this condition, which is simply one of broncho-pneumonic infiltration of approximately an entire lobe.

The first indication is to prevent infection from the upper air-passages from aggravating the condition of the pulmonary area of involvement, namely, by antisepsis applied to the nasal passages and throat. For the nose he prescribes:

Vaselin	30. gme.
Boric Acid	5. gme.
Camphor	0.050 gme.

To be applied to the inside of the nose twice daily.

For the mouth and throat:

Carbolic Acid	1. gme.
Thymol Sodé	0.50 gme.
Glycerin	
Alcohol	āā 25.0 gme.
Distilled Water	450.0 gme.

With this the throat and mouth are to be cleansed, especially about the teeth.

Second.—Combat asphyxia: (*a*) by emetics (these are not now favored in the United States); (*b*) by diffusible stimulants, which the author himself prefers:

Ammonium Acetate	1.50 gme.
Sodium Benzoate	0.50 gme.
Brandy	8 to 10.00 gme.
Syrup Tolu	
Water	āā 45.00 gme.

A dessertspoonful every one or two hours, according to age.

A good revulsive is the mustard-bath for five minutes. Blisters are rarely to be used, and never until late in the disease.

Camphor gives excellent results where intense hyperemia of the lung exists—

Benzoic Acid	0.15 gme.
Powd. Camphor	.03 gme.

Given at each dose in milk.

Camphorated oil can be used hypodermatically.

Third—Cardiac asthenia is to be met by the tincture of digitalis by the mouth, or caffeine subcutaneously.

Fourth—When with signs of general toxemia, there are no other physical signs than those in the lung, one may give cool baths every three hours to reduce the temperature and quiet the nervous system.—*Am. M. S. Bull.*, 1896, ix,41.

ADENOID VEGETATIONS.

Meyer, of Copenhagen, who recently died, made investigations concerning adenoid vegetations in different races and in various parts of the world (*Hospitals-Tidende*, Nos. 6 and 7, 1895, and *British Medical Journal*, Dec. 14th, 1895) and came to the conclusion that warm climates are not so favorable to the growth of adenoids as are cold. Among 60 Esquimaux children, between the ages of 6 and 14 years, Dr. Helms found them present in 44. In North Dakota, Dr. Quarry found them frequently in the native tribes of Indians. Dr. Cantlie, of Hong Kong, reported their frequency among the native Chinese of the Mongolian race. Dr. Demitzer found them rarely among the Siamese. In the Dutch Indian Colonies at Singkil, on the northwest coast of Sumatra, of 113 natives, only 3 were affected; in the Island of Amboika, among 326 children, 2 boys had them, and in the Island of Sapporo, only 5 were affected out of 717 children. Meyer also studied busts and portraits in the different European collections and found facial evidence, as far back as Roman art goes, of the presence of adenoids. The portraits of Canova, the sculptor, show that he was a sufferer in a marked degree.

OTITIS MEDIA AS A COMPLICATION OF PNEUMONIA.

F. B. Ball (*Med. News*, Sept. 21, 1895) deals with the cases of broncho-pneumonia in children, complicated with cerebral symptoms, such as headache, vomiting, delirium, restlessness, fever and coma, which suggest meningeal inflammation, but which are really due to middle ear inflammation. He alludes to the investigation of Rasch, of Copenhagen, who found in 65 autopsies of children under two years of age, suppurative disease on one or both sides in 46, and catarrhal lesions in eight. Nearly all who died of broncho-pneumonia showed otitis, the pneumococcus being found in the great majority. Many had had symptoms of meningitis, no trace of which could be found. Perforation of the membrane was found in only four cases. Ball relates three cases in illustration, and in discussing the clinical features which assist in diagnosis, he relates that the pupils may sometimes be contracted, at other times dilated, but both equally. The deafness is likely to precede the coma, whereas in meningitis the deafness is in direct proportion to the depth of the stupor. The pain is usually referred to the ear, or the side of the head in ear trouble, but is general in meningitis. He very properly insists on examination of the membrane in these cases, and on prompt surgical treatment when it is found necessary.

TUBERCULOUS DISEASE OF THE MIDDLE EAR.

At a meeting of the Manchester Medical Society (*Brit. M. J.*, Dec. 21, 1895) held on December 4th, 1895, Milligan emphasized the following points as regards diagnosis. Insidious onset unaccompanied by pain, the presence of a perforation in the centre of a pale edematous membrane, enlargement of cervical glands, and early facial paralysis.

To obtain positive evidence of the presence of tubercle, if a mastoid operation is necessary, he inoculates guinea-pigs subcutaneously with scrapings of the diseased bone. Evidence of the tuberculous nature of the disease being present in the liver, glands, etc., of these animals when they are killed in from two to five weeks from the time of inoculation. He thought the prognosis was extremely grave in young children, and insisted on thorough removal of all diseased parts.

IDIOPATHIC ENLARGEMENT OF THE SPLEEN, WITH RECURRENT ATTACKS OF PURPURA.

Hawthorne (*Glasgow M. J.*, 1895, xliv, 354), says that chronic enlargement of the spleen is a not uncommon event in a number of diseases to which children are liable, and its association with leucocythemia, lymphadenoma, malarial infection, amyloid disease, and cirrhosis of the liver is generally recognized. It may also be present with the signs of inherited syphilis, and it is not infrequent to find it together with evidences of rickets. In the case recorded below, whilst splenic enlargement, both in duration and degree, is the leading clinical feature, there is an entire absence of all positive evidence to support a diagnosis of any of the above-mentioned conditions.

K. I., now 11 years of age, was brought to the out-patient department on account of general failure of her health and of a swelling in the abdomen. She had been an exceptionally healthy child until September, 1891, when she had an attack of influenza. This was followed by jaundice and suppuration of the cervical lymphatic glands, her illness confining her to bed for nearly four months, and in the early part of the winter of 1892-93 had an attack of purpura, which was confined to the lower limbs; there were no discharges of blood except slight bleeding from the gums. In January, 1893, her mother noticed that the abdomen was swollen. At an even earlier date the child had been subject to occasional diarrhea, but there had never been any vomiting or complaint of abdominal pain. Physical examination at once revealed very considerable enlargement of the spleen, the lower or anterior extremity of the organ reaching almost to the middle line in front, and the inferior border descending to a line about 1 inch above the left iliac crest. Percussion placed the upper border, in the mid-axillary line, at the fifth rib. The tumor had a perfectly smooth surface, and was quite free from tenderness. On examining the hepatic region, the liver appeared to be slightly enlarged and its tissue unduly firm. Thus, the sharp anterior edge of the organ was felt below the costal margin, and was more definite and pronounced than is normal. The heart and lungs, to physical examination, were normal, and the the urine free from albumin and sugar. The blood showed a few small-sized red corpuscles, but no increase in the number of white corpuscles: hemoglobin, 50 per cent.; red corpuscles, 65 per cent. The general appearance of the child suggested languor, and there were evidences of anemia, the skin generally being pale with a faint sallow tinge; gums not spongy nor excessively vascular, but the lower incisor teeth were loose, and on moving them there was some inclination of the neighboring gum to bleed. Odor of breath very disagreeable. No retinal hemorrhages. No suggestion of rickets or of inherited syphilis in any part of the body, and no enlargement of superficial lymphatic glands other than a few firm glands near each angle of the jaw. On three occasions (in addition to the above) she has suffered from purpura. She has now recovered from the immediate effects of this, and though pale, appears vigorous and active. It may be mentioned that the child's home conditions are favorable, and there is no ground for suspecting the existence of a scorbutic element in the case.

Treatment, as far as the splenic condition is concerned, has been quite unavailing, but the general condition of the child has always improved after residence at the coast, and iron and arsenic in full doses have appeared to exercise a beneficial influence. For the most part, anemia, since the child has been under treatment, has not been a prominent feature of the case, the blood usually showing about 70 per cent. of hemoglobin. Similarly the state of the general nutrition is, and has been, fairly satisfactory.

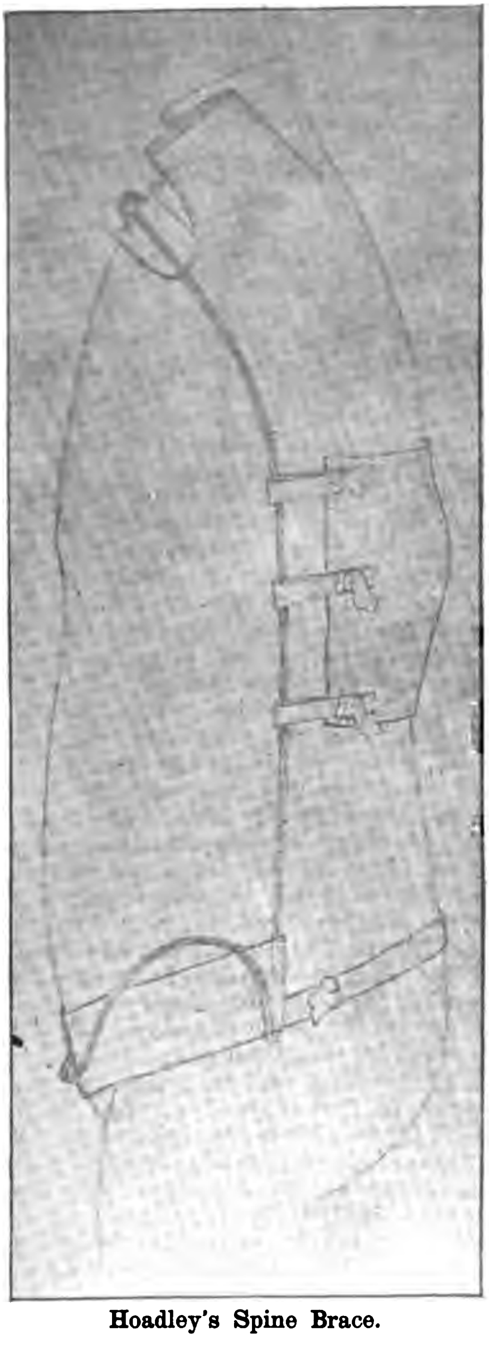
SPINE BRACE.

This brace was designed by Hoadley (*Journ. Am. M. Assoc.* 1895. xxv. 898) for the mechanical support of the middle region of the spine.

In its simplest form the brace consists of a steel frame, a rigid chest pad and two aprons. The chest pad is adjusted in contour to fit the upper anterior portion of the chest. The pad should be in length about three times its width and adjusted transversely, resting immediately below the sterno-clavicular articulations. Its real length transversely should be as long as practical without being interfered with by the action of the pectoralis major muscles, in the movement of the shoulder. It should be made of sheet metal hammered to give shape and rigidity, covered and lightly padded.

The frame consists of one piece of light round rod steel, from three-sixteenths to five-sixteenths of an inch in diameter, so shaped that it crosses the body above and below and lies parallel with, and in close proximity to each side on a line with the axilla; the ends are welded or brazed where they meet, making it one continuous piece.

The frame consists of four portions—an upper, a lower and



Hoadley's Spine Brace.

two lateral portions. The upper and lower cross in front of the chest and pelvis respectively, and no portion of the frame passes behind the body. The upper portion of the frame arches upward and forward from a short distance below the axillary space on one side, crosses the chest pad, and then downward and backward to a corresponding point on the opposite side, where it becomes continuous with the lateral portions. There is no fixed point to indicate where the upper and lateral portions come together; a gentle reverse curve marks the place. The lateral portions are so adjusted as to lie close to the sides, a little nearer the posterior than the anterior aspects, and extend from below the axilla to the space just behind the anterior superior spine of the ilium, below the crest and above the trochanter major. In children, this portion is practically straight, while in adult females they bend in at the waist line and then arch out over the more or less prominent hips, but remain straight in the antero-posterior directions unless some deformity requires a change in this shape.

The lower portion is simply to connect the two lateral portions across the body at their lower ends and hold them rigid relative to each other. In the adjustment of this portion, however, there are some difficulties; for if we extend it straight across from the lower end of one lateral portion to the other, it would prevent the flexion of the thighs, and then again if we arch it up over the thighs it would cross the body above the umbilicus and very materially interfere with the clothing at the waist. And to cross behind the body would be still more objectionable, as the patient would then have to lie upon it and it would be more difficult to put it on and take it off; so it must take a somewhat tortuous course and cross in front, by avoiding those places where its presence would be objectionable. This is accomplished by having the lower portion turn sharply upon the lateral portion which it is to follow a short distance and then arch it over the flexed thigh and then depress to, or very near, the pubis, to some extent, following the fold of the groin in the direction of Poupart's ligament and as close as possible, having in mind that when the finished brace is applied no part of the frame touches the body, but lies very close to it at all points.

The upper portion of the frame rests by its central portion upon the center of the chest pad, to which it is secured by a double acting joint so that the pad may adjust itself to the chest.

The lower portion of the frame is prevented from touching the body and given a fixed point by an apron made of two thicknesses of canvas from two to four inches wide, according to the size of the brace, between the layers of which a few whalebones have been inserted vertically to prevent rolling. The apron is secured to the lower extremities of the lateral portions of the frame by its ends, and at such an angle that its direction from its attachment toward the center shall be downward, or, in other words, the upper margin of the apron at its attachment shall be the longer one, otherwise the tendency will be for the apron to slide up across the center of the abdomen. This apron should be just long enough to keep the lower part of the frame from touching the body. If properly adjusted it will pass across the lower part of the abdomen very close to the pubis, and upon each side will include, and remain below, the anterior superior iliac spines which constitute the lower fixed point of the frame.

To complete the brace of simple form it is only neccssary to attach the second apron or back band. This second apron, which is to extend from one lateral portion of the frame across the back to the other, is to be also of double thickness made in shape to fit any angular deformity. It should be from three to six inches wide without whalebones. One end is to be permanently fastened to one lateral portion of the frame, at a position opposite that portion of the spine to be supported; the other end is to be provided with two or three straps with buckles with which to buckle it to the opposite lateral portion of the frame. Thus completed, we have a spine brace of the simplest possible construction, the smallest amount of material, and at the same time providing for the fixation of the three points relative to each other, in a most positive and efficient manner. The upper front part of the chest, the pelvic bones below and the weaker portion of the spine behind are retained in a relative position to each other with positive certainty. Positive, because these are parts of the framework of the body that have a certain relative stability to each other, and between which all of the deformities in caries of the spine in this region occur. These are the points, and the only points, where definite and reliable resistance to deformity can with certainty be applied and maintained.

The foregoing description of the brace, together with the description of its applicability, refers only to the brace in its simplest form and to diseased conditions of average severity with but moderate deformity.

The brace, however, is susceptible of many modifications and the addition of many accessories to meet the requirements of varying diseases and deformities, without losing the original principles of construction.

A CASE OF BRONCHO-PNEUMONIA IN THE NEWBORN.

Hemenway (*Med News*, 1896, lxviii, 72) reports a fatal case of broncho-pneumonia in a newborn child. The child was born asphyxiated and it did not breathe for half an hour after birth. The case illustrates: 1. That inflation by expired air may succeed when other methods fail. 2. That the method is dangerous because of the ease with which mechanical injury may be done in spite of care. 3. That the method may be dangerous because of the possibility of infection.

He did not think that delay in extricating the head from the vaginal canal was the only cause of atelectasis, because: 1. The child's pharynx was clear from mucus. Of course, if the child's face was covered by the posterior wall of the vagina asphyxia might be produced without the inhalation of mucus. In that case, however, as soon as the face was extricated there would be no further obstruction to respiration. 2. Atmospheric pressure alone was not able to open the air-cells of the lungs.

TETANY, WITH ILLUSTRATIVE CASE.

George W. Miles (*Med News*, 1896, lxviii, 36) reports the following case:

In October, 1894, Florence S., a girl, aged seven years, was vaccinated. About ten days later severe inflammatory symptoms supervened upon the full development of the pock, caused by undue traumatism, the child having injured the arm and destroyed the original vesicle by scratching or rubbing it during sleep. The inflammation was readily relieved by an anodyne and astringent lotion. A considerable wound resulted, however, and there was sloughing of the skin over a space as large as a silver half-dollar. After subsidence of the inflammatory action the healing process was rapid and the arm improved daily. About six weeks after the vaccination, on the morning of November 14th. there occurred tonic spasms of the arms and legs, succeeded by the same condition in the muscles of the neck and back, and in the abdominal muscles. In the latter, particularly, the rigidity was so great as to elicit cries of pain. The muscles of the neck remained for the most part in a state of tonic contraction, so that any movement of the head was rendered quite impossible. The muscular groups of the forearm, the upper arm, and the legs were involved. The facial muscles were affected, and the grimaces and contortions resulting served more thoroughly to alarm the friends. The muscular spasms were bilateral. The tips of the fingers and thumbs were drawn together into a conical shape. Some of the toes were flexed and bent laterally under the other toes. The upper arms were drawn against the sides of the thorax and the forearm strongly flexed. There did not seem to be any involvement of the muscles of the diaphragm or bladder, as reported in some cases. These paroxysms lasted only a few moments at a time, but continued intermittently for three or four days, and in the beginning at least the phenomena of tetanus were closely counterfeited. Opisthotonos occurred frequently during the first day. Several authorities, while speaking of the startling resemblance which tetany bears to genuine tetanus, mention as distinguishing the diagnosis that trismus occurs in the outset in tetanus, and is not apt to be or is not often found in tetany. In this case this diagnostic aid was not given, as the initial spasm of the masseters was a prominent feature of the case. The jaws were so firmly set together that the handle of a spoon could not be inserted flatwise. Any attempt to stir the child in bed was immediately followed by a tense and extremely rigid condition of the entire muscular system. The increased mechanical excitability, which is a well-marked symptom of tetany, was very prominent in this case. The slightest sound, even speaking the patient's name or extending the hand toward her or touching the surface was sufficient to produce a paroxysm. These spasms continued, as I have said, for three or four days at irregular intervals. The patient slept very little for all of that time during the day or night, a light sleep of fifteen or twenty minutes being followed by her awakening with screams and new paroxysms and pain in the contracted muscles. The pain complained of was sometimes in the jaws, sometimes in the left arm, sometimes in the abdominal muscles. Following each spasm the entire surface of the body was bathed in perspiration. While in the beginning the spasms occurred several times in the space of an hour, the intervals of relaxation became gradually lengthened, and much relief was obtained, though some stiffness of the muscles remained after three or four weeks. After the second day the relaxation of the jaws for a portion of the time was sufficient so that a tube could be inserted between the teeth, and in this manner it was necessary to introduce nourishment. This method of feeding was followed for about two weeks, as for that entire period the masseter muscles were never entirely relaxed except occasionally during sleep. The bowels were greatly constipated. The pulse during the height of the attack remained at 140 at night and 120 in the morning. There was very little rise in temperature, at least not to exceed a degree. For a couple of weeks preceding the complete attack nervous symptoms had been noticed by the parents, slight rigidity of the muscles, disturbances of vision, etc. The result of this was complete recovery. Convalescence was considerably prolonged.

How much, if anything, the vaccination or the wound following had to do with the symptoms which existed was uncertain.

The child was of a general neurotic temperament; she was of a constipated habit; she had been exposed to the cold and wet; she had at the time an extremely sore mouth, the result of digestive disturbances. Each of these things and many others are believed to have been causes of special cases of tetany. No doubt some or all of them entered into the etiology of this case, and it is possible that the irritation of the cutaneous surface by vaccination may have likewise been a factor.

NEPHRITIS OF THE NEWLY BORN.

Jacobi (*N. Y. Med. Journ.*, 1896, lxiii, 65) in an address delivered before the Medical Society of the District of Columbia recapitulates the main points of his paper as follows :

Nephritis is a frequent disease of infancy and childhood and by no means very rare in the newly born. What was formerly considered mere albuminuria, or a transient form of it, we have been taught by improved methods of investigation, mainly by the use of the centrifuge, to recognize as nephritis. A predisposition to nephritis in the young is caused by the fragility of the blood-vessels in the newly born ; by the relative imperviousness of the young renal capilliaries compared with the large size of the renal arteries ; by the feebleness of the young intestinal muscle, which proves insufficient to expel toxic contents ; by the extensiveness and size of the young intestinal blood-vessels and lymphatics and the large size of the villi, all of which favor the absorption of toxins.

From an etiological point of view, nephritis in the newly born may be :

1. *Congestive* (from feeble circulation, congenital heart disease, asphyxia, or exposure to low temperatures).
2. *Obstructive* (from the physiological rapid decomposition of the blood of the newly born ; the formation of hematoidin = bilirubin ; jaundice ; the production of methemoglobin by chemical poisons, such as potassic chlorate, or by excessive heat ; or the presence of blood in the uriniferous tubes).
3. *Irritative* (from the presence of uric-acid infarctions or hematoidin infarctions, of purpuric or other interstitial hemorrhages, or of microbes and toxins in the numerous eruptive and infectious maladies and in enteritis).

TREATMENT OF CHOREA BY SALICYLATE OF SODA.

W. F. McNutt (*Pacific M. J.*, 1896, xxxix, 1) reports a rapid cure of chorea from the salicylate of soda. The patient, a boy seven years old, had been sick for two years, and no benefit was obtained from the bromides, arsenic, chloral and other remedies. He was given the following mixture :

℞ Sod. Salicyl. ʒii
Syr. Gaulther. ℥i
Ag. Gaulther. *ad* ℥ii

Mix. Sig. Twenty drops every hour for six hours; and thirty drops every two hours thereafter.

The patient was nearly well in forty-eight hours, and in a week was allowed to sit up in bed.

CORRESPONDENCE.

THE FILTRATION OF MILK THROUGH ABSORBENT COTTON.

To the Editor of PEDIATRICS:

SIR:—In his article on infant feeding published in PEDIATRICS, January 1st, 1896, and in his new book on "Therapeutics of Infancy and Childhood," 1896, Dr. A. Jacobi after speaking of my infant-feeder (devised in 1889), refers to my method of filtering milk through absorbent cotton (*Archives of Pediatrics*, July, 1894) by saying on page 502: "His (Seibert's) plan-developed later—to filter milk before sterilization, is identical with that recommended by Auerbach."

In answer to this statement I submit the following letter, received by me from Dr. Norbert Auerbach, of Berlin, (the author in question) a few days ago:

BERLIN, Dec. 16th, 1895.

DEAR SIR:—In response to your letter of the 4th inst., I can but inform you, that I have never published any report on the filtration of milk through cotton. I also do not remember of ever having made such experiments.

Years ago I attempted to filter milk through asbestos-pasteboard (Asbest-Pappe) but did not publish these attempts, because the cleansing of milk by means of the centrifuge (milk-separator) appeared to me the most feasible for large dairy establishments.

That I highly appreciate the importance of cleanliness of milk before sterilizing in the household as well, is shown by my remarks published in my last article (*Therapeutische Monatshft.*, January, 1895), which you cited in your letter.

Respectfully yours,

DR. AUERBACH,
Blumenstrasse 68,
Berlin.

To DR. A. SEIBERT,
New York.

The remarks Dr. Auerbach refers to, read: "and to remove the impurities out of the milk by twice straining (seihen) or to employ the centrifuge." Dr. A. Jacobi listened in person to the report of my numerous experiments on filtering milk through absorbent cotton before sterilization six months before Auerbach's remarks were published. In his criticism in his book Jacobi does not mention absorbent cotton, but only speaks of my plan for the purpose of disposing of it as "identical" with a plan of Auerbach's. As Auerbach never devised any plan for filtering milk (according to his letter) and as the wording of Jacobi's criticism broadly hints at a possible plagiarism, and as his book will be read by many and this statement, like all others therein, will be accepted as based on facts, I can but seek a partial redress by publicly protesting against this statement and the criticism implied therein as misleading.

New York, Yours respectfully,
Dec. 31, 1896. A. SEIBERT, M. D.

To the Editor of PEDIATRICS:

DEAR SIR,—Your space is valuable; so is my time. The writer of the above letter chooses to take offense. I declare that I feel certain that none of your readers, except he, noticed in my words a " broad hint at a possible plagiarism." Plagiarism of what? Absorbent cotton?

The "identical" nature of the process I speak of, is in the filtering which can be accomplished by any porous substance and not in the filter. Your hyperesthetic correspondent uses cotton; so do hundreds of apothecaries in New York City who, these ten years or more, have cleared their medicinal solutions by filtering through absorbent cotton. My cook employs a napkin. Filtering paper accomplishes the same purpose. Auerbach does not "remember of ever having made such experiments with cotton." Evidently he has experimented with so many things beside asbestos, as not to care to keep an account of them or morbidly to look ahead for priority. His is more serious work. The rules in regard to hay feeding, clean stable, peat bedding, udder washing, (PEDIATRICS, page 3) are his in common with others. He adds: "Impurities are removed by straining twice, or by centrifuging. Such milk deserves the name of milk for infants." "Straining" and "filtering," are two different words it is true. Webster, however, will be found quite interesting reading. Even the old lexicographer speaks of "straining milk."

Yours respectfully,
A. JACOBI.

[We are quite sure that our readers, like ourselves, failed to detect any "broad hints at a possible plagiarism," as our correspondent puts it, in Dr. Jacobi's article "Infant Feeding—A Review," in our last number. Therefore the necessity of partial redress, or even a complete one, is not so urgent as our belligerent correspondent would have us believe.—Editor PEDIATRICS.]

Gibier, of New York, has succeeded in obtaining the diphtheria antitoxin in powder form; and he also prepares a "mixed" or double antitoxin, for cases suffering from "mixed" Klebs-Loeffler and streptococcus infection.

PEDIATRICS

Vol. I. FEBRUARY 15th, 1896. No. 4.

Original Articles.

A CASE OF MUMPS WITH EDEMA OF THE CORRESPONDING EYE AND SIDE OF THE HEAD SIMULATING MASTOID DISEASE.

By GEORGE CARPENTER, M. D.,
London.

On October the 27th, 1892, Mary A. O. H., aet. 3½ years, was sent to me for consultation by Dr. Frederick Nicholls, of Croydon, to the Evelina Hospital, as he feared that there was suppurative mastoiditis, secondary to ear trouble, and that it might be necessary to admit her for operation. When she arrived she looked ill. Her pulse was 100 to the minute, the respirations 28 to the minute, and the temperature 96.6° F. The most noticeable feature in her appearance was a considerable amount of edema of the left side of her head. The edema extended upwards nearly to the mid-line of the vertex, backwards to the occiput nearly; the mastoid was edematous, and the corresponding eye swollen. The ear was examined and the drum was found healthy in every respect. She complained of ear-ache during the necessary manipulations. The jugular veins were not implicated. The fundus of either eye was found to be perfectly healthy. Further examination, however, showed that the parotid gland was involved, being swollen and hard, and that the corresponding submaxillary gland was enlarged. An enlarged gland, the size of a bantam's egg, was detected under the right sterno-mastoid muscle, parallel to the ramus of the jaw, and falling short of the deep attachment of the parotid. The throat was healthy. With the exception of a trace of albumin in the urine there were no physical signs.

The parotid was still swollen on October the 31st, but very much smaller, and the submaxillary gland was not enlarged. The edema over the mastoid had disappeared, and the cervical gland on the right side was very much smaller. The albumin had disappeared, and the child was happy and contented. The temperature continued subnormal. On November the 3d the deep cervical glands on both sides were swollen, and there was still some hardness about the left parotid, but much less than formerly. The temperature remained persistently subnormal. Pulse 126. Resps. 28. Nothing further worthy of note occurred during her stay in hospital, and she was discharged quite well in the ordinary course.

Remarks.—The case is of interest from its simulating, at the first glance, mastoid trouble and from the fact that hemi-cranial edema should stand out as the prominent feature in a case of parotitis. I have not met with this complication before, or since the above date, and the text-books do not call attention to such an addition to this disorder. There is an anatomical explanation of the peculiar distribution of the edema which I think worthy of remark, but there were, possibly, additional factors at work ; for pressure on the main trunk of a vein is not, as a rule, sufficient to account for dropsy over the area supplied by its tributaries. The case is published as a clinical record of a certain unusual complication and not as a peg on which to hang a thesis. Whatever the explanation, the venous anatomy is doubtless one factor contributing to the result, as will probably be admitted when this venous distribution is called to mind. The terminations of the temporal, transverse facial, and posterior auricular veins are in close anatomical relationship with the parotid gland, and their junction just below the ear and in front of the anterior border of the sterno-mastoid muscle will doubtless be remembered, as also their distribution, viz., to the eye, to the side of the head, and to the mastoid and scalp above and beyond it.

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SOME REMARKS ON DIPHTHERIA.*

By William Cheatham, M. D.
Professor of Ophthalmology, Otology and Laryngology in the Louisville Medical College, Louisville, Ky.

WE all recognize the importance of bacteriological examination in cases of diphtheria, or in cases where we suspect diphtheria, and I simply wish to briefly report a few instances where the most careful tests by competent bacteriologists failed to detect the characteristic organism in cases of undoubted clinical diphtheria.

Case 1st.—Is a little girl who has had a severe attack of undoubted diphtheria, so diagnosticated clinically, and she has had all the sequelæ of a typical case. Membrane in the throat was abundant and characteristic; there was some paralysis of the bowel; albumin and casts in the urine; enlarged glands, etc. A specimen of the secretion from the throat was secured and several careful bacteriologic examinations made, the bacteriologists in each instance reporting that no bacilli were found.

Case 2d.—A little boy, six or seven years of age, developed symptoms which indicated diphtheritic trouble, but I was rather doubtful as to whether it was a case of true diphtheria or simple tonsillar trouble. Bacteriological examination by Dr. Koehler showed a negative result. The child has since developed membrane on the anterior pillar of the fauces, also the uvula, but a second bacteriological examination results in the finding of no bacilli.

Now here are two cases, one of which I am positive is diphtheria, but the second is doubtful. Bacteriological examination did not reveal the Klebs-Loeffler bacillus in either. I would like to have the bacteriologists present give us some reason for not finding the bacillus in the first case, which is one of undoubted diphtheria. Both cases were treated with antitoxin, and in the first one the throat had been sprayed with antiseptics before I saw the patient.

I read to-day in one of our medical journals an article in which the immunizing effects of antitoxin were thoroughly discussed. The author stated that in one of the New York hospitals, I think the Children's, that they had in 108 days 107 cases of diphtheria. They were absolutely unable to control the epidemic by the employment of all the usual methods of prevention. Under the immunizing effects of antitoxin 5 new cases developed in 112 days. In other hospitals where they had 1,014 cases of diphtheria the number was reduced to 16 cases after immunizing injections of antitoxin. The time of immunization has also been extended from two weeks to thirty days by careful observation. Another point brought out in the paper was the question of kidney lesions following the injection of antitoxin. In thirty-seven cases the urine was examined before injection of antitoxin. In one case there was thirty per cent of albumin; two days afterwards, sixty per cent; four days afterwards, no albumin. In another case there was simply a trace of albumin on the ninth day of August; that day they gave the child an injection of antitoxin, and on the eleventh day they found no albumin. In one case they found sixteen per cent of albumin the second day after the injection, and on the fourth day there was no albumin. The amount of antitoxin used was from 50 to 600 units. In the majority of the cases the Klebs-Loeffler bacillus was found present by bacteriological examination.

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* Reported to the Louisville Clinical Society.

Dr. J. B. Marvin: I think Dr. Cheatham himself has given the reason why the bacteriologists failed to discover the Klebs-Loeffler bacillus in the first case he reported, as he states an antiseptic solution had been applied to the throat. The membrane is not made up alone of the Klebs-Loeffler bacilli; in fact, these form a small percentage of the mass. A bacteriological examination should always be made, and before being criticised it should be used in cases where there has been no local application made to the throat, or it may be misleading, as indicated by Dr. Cheatham's remarks.

Again, we ought to bear in mind, even if the bacteriologists report the presence of the Klebs-Loeffler bacillus, it does not always mean that we have a case of diphtheria. The Klebs-Loeffler bacillus may unquestionably be found in a healthy throat. It is like the tubercle bacillus, or any other bacillus, it may be found in any mucous membrane and still not infect the patient. We must have the soil as well as the seed.

Dr. Carl Weidner: Dr. Marvin has probably given the correct explanation as to why the Klebs-Loeffler bacillus was not found in the case reported by Dr. Cheatham. We cannot be too careful in taking material from the throat for making a bacteriological examination. Of course the gentlemen are all familiar with the fact that we should not apply an antiseptic to the throat if we are to make a bacteriological examination of the secretion. We may secure a specimen of the secretion by use of an ordinary probe or swab, or possibly it would be better to remove for testing purposes a piece of the membrane. If we are careful in our methods, taking care not to disinfect the throat by the application of antiseptics before removing a specimen of the membrane, we can rely pretty positively upon the result.

As to the albumin: Those gentlemen who have had the largest experience with this disease, and have observed it closely, have usually found albumin present at some stage of the disease. If we had more accurate statistics as to the period when albumin usually appeared we could speak more intelligently concerning the effect of antitoxin injections in relation to albumin. Dr. Cheatham mentions one case where there was an increase of albumin from thirty per cent before the injection to sixty per cent afterwards. I believe it is pretty generally admitted that without antitoxin injections we may have albumin in cases of diphtheria, varying in amount and frequency, according to different observers.

As to the immunizing effects of antitoxin we have not had enough experience in the matter to state positively what the results would be. It has been said that one injection renders a child immune for two or three weeks, and one observer gives the limit thirty-one days. The question is still an open one, and I do not see how we can advise such a measure as general vaccination or injection, which would have to be repeated every thirty days. Immunization might be effected in hospitals, but I doubt its practicability anywhere else. We are too far from positive knowledge in regard to immunization to advocate it in general practice in a community.

DR. S. G. DABNEY: I will only touch upon three points suggested by Dr. Cheatham's report. First, the value of the presence or absence of the Klebs-Loeffler bacillus; second, the question of immunization; third, the danger of kidney complications by the administration of antitoxin. In regard to the importance of the Klebs-Loeffler bacillus, it seems to me Dr. Marvin's explanation is the correct one, that this bacillus may be present in the throat without diphtheria. At a recent meeting of this Society I gave a short history of my visit to some of the Eastern hospitals. I was particularly impressed with a remark made by Dr. Buckingham in the Boston City Hospital, that the presence of the Klebs-Loeffler bacillus holds the same relation to diphtheria as does albumin to Bright's disease. Its presence is not proof positive of the disease but presumptive evidence of it. Its absence in the first case reported by Dr. Cheatham may be accounted for by the fact that the child's throat had been disinfected with bichloride of mercury solution and other antiseptics.

As regards immunization: Reports very similar to those referred to by Dr. Cheatham were published some months ago, based upon observations made in New York and Boston hospitals, especially the New York Infant Asylum and the Boston Children's Hospital. In these cases immunity seemed to be secured for from twenty-eight to fifty days or thereabouts. One or two cases appeared after four weeks.

In a recent issue of the Philadelphia *Medical News* there was an editorial article reviewing the opinions of Drs. Chapin, W. H. Porter, and our former townsman, Dr. Vissman, on the effect of antitoxin on the kidney. Their conclusions were based on experiments upon rabbit's kidneys, and the Editor, in commenting upon the report, stated that such conclusions ought to be taken with a great deal of allowance, because it was well known that the kidneys of rabbits were exceedingly prone to disease, showing a reaction from very slight causes. A large number of cases—over 800—were referred to in the same article, in which antitoxin had been used for the purpose of immunity with no considerable reaction of any kind following it, and no decided disturbance of the kidneys, rarely a transient albuminuria, but nothing serious.

I agree with what Dr. Weidner has said concerning the injection of antitoxin for producing immunity. We have so little positive knowledge on the subject at the present time that we cannot form an intelligent opinion. In hospitals it would seem to be practicable, but I hardly see how it could be applied for general immunity in the city. Where there is one case in a family and other children who cannot be isolated, it would be well from our present knowledge on the subject to use it for prevention in them.

DR. LOUIS FRANK: Dr. Marvin has about covered the ground as to the cause of the absence of the Klebs-Loeffler bacillus in many of these cases. It is something like searching for the tubercle bacillus—we may make numerous examinations without finding the bacillus, from the simple fact that the specimen examined may not contain it. We know the Klebs-Loeffler bacillus is very small, and may be overlooked in making the inoculation; again, it may be present in one portion of the membrane and absent in another. Even if we fail to find the bacillus in our examination, this does not prove that it is not a case of diphtheria, and we might say the same thing is true of tuberculosis. The fact that we find at times the diphtheria bacillus in healthy throats may cause confusion. I cannot see how it would be possible to arrive at a positive conclusion or opinion as to the virulence of an organism merely by a microscopical examination. To be absolutely sure of the virulence of these organisms, which is also true of any organisms, we should make inoculation experiments. It is true this in itself would do away, to a great extent, with the value of the diagnosis, because of the delay which would be necessary in making such experiments. We also know that after the use of antiseptics all bacteria grow very slowly. Experimental work has shown—I do not know whether true of this bacillus or not, but in pus-producing organisms especially—that it is not the application of the germicide itself to the organism or to the portion being examined, but carrying along into the culture tube a certain amount of the antiseptic, which, while it does not destroy the growth of the organism, will necessarily inhibit its growth. It requires a very small percentage of bichloride of mercury solution to inhibit the growth of bacilli in culture media.

In regard to immunization with antitoxin injections: The subject is certainly a very logical one, and if anything could be done in this direction it would be very desirable. I believe the movement inaugurated by the Women's Club will be productive of benefit in educating the masses in the use of antitoxin, not only as a curative agent at the time diphtheria appears, but also in families where other children are present, as an immunizing agent. I certainly think if this could be done it would be desirable. There is no doubt but the use of antitoxin offers immunity for a certain length of time. If this time can be prolonged sufficiently to do away with the diphtheria already present, it would be of great benefit.

DR. J. W. IRWIN: The question under discussion is extremely interesting, as are all the subjects Dr. Cheatham brings before the society. But I find we are in the midst of many difficulties. First, antitoxin has not been used sufficiently long anywhere to state positively anything about it. It seems to exert some influence in ridding the throat of membrane. Beyond this I have seen no effect produced by antitoxin not obtained by former methods. Within the last seven years I have not lost a case from diphtheria; I have had only one case treated with antitoxin. That case recovered, and the patient seems very feeble and in poor health ever since the attack, which occurred last Spring. I now have under my care a case of diphtheria; the membrane was removed from the throat to-day. The child has been sick eleven days.

I do not place much reliance in the microscope in these cases, nor do I go to the trouble to have bacteriological examinations made. I think every physician who has had experience in diphtheria need hardly ask the bacteriologist as to what diphtheria really is. The appearance of the membrane, appearance of the child, and the history of the illness, when taken into account, is quite sufficient to determine that it is a case of diphtheria. Physicians place too much reliance in the use of the microscope. It may be of some use, but, for all practical purposes, it is of no value in determining a case of diphtheria.

In regard to immunizing people by injection of antitoxin: It seems to me that this would be a very doubtful proceeding, and I believe it should be done very cautiously, if at all. I would be unwilling to inject horse serum and carbolic acid into my own system, or have my child subjected to such treatment until after I had known more of its immunizing effects in hospitals for a year or two, or perhaps longer. I think, in view of the fact that the diphtheria we are having here is a mild type, we should resort to the older-tried methods, as isolation and disinfection of the house. This will enable us to do away with the immunizing process to a great extent. Immunizing might be indicated if two children had been sleeping together, and one of them took diphtheria, and the other being exposed to the infection. So far as the effect of immunization is concerned, the time it lasts—two to four weeks—is too short. I have seen, over and over again, diphtheria in the same house, after the ordinary methods of disinfection, within six months and as late as eighteen months after the initial case had occurred. Whether the disease arose from the infection of the house eighteen months before is a question that could not be determined. We have seen water pipes, closets, etc., torn up after a case of diphtheria had occurred in the house, yet the disease recurred notwithstanding this fact. So that, when we come to trust to the bacteriologist for all our knowledge on this subject, we should go slowly. The bacteriologist may have his day, but that day has not come yet.

Dr. T. C. Evans: I was impressed with one thing Dr. Irwin said, i. e., the length of time diphtheria infection may remain in a house. I have now a case of diphtheria in the same house where I had one two years ago. Prior to the case occurring two years ago, there had been no diphtheria in the house for about two years. I think that the infection has remained in the house during these four years.

As regards immunization: If an injection of antitoxin will render a child immune for thirty days, certainly we have gotten some benefit, and probably more than would result from the ordinary methods of disinfection. In the case reported by Dr. Cheatham, in which they failed to find the Klebs-Loeffler bacillus, the antiseptic used was probably sufficient to destroy the action of the bacilli in the culture tube.

There is one pathognomonic symptom, and that is the paralysis following diphtheria. I do not think paralysis occurs after any other throat lesion. I do not agree with Dr. Irwin that it is always possible to make the diagnosis clinically. There has been an epidemic of what was called follicular tonsillitis in the southeastern portion of this city, the doctors there having diagnosed and treated the cases as simple follicular tonsillitis. I know of three or four cases of paralysis following these cases, and I am convinced that the cases followed by paralysis were all diphtheria. It is stated by some authorities that paralysis may follow a simple tonsillitis. I am not inclined to believe this.

DR. P. F. BARBOUR: The agitation of the immunization question in Louisville by the Women's Club will have a tendency to awaken the people to a realization of the danger not only of diphtheria, but also of other infectious diseases. I saw a case of scarlet fever not long ago, and a neighbor came in, bringing her child, eight or ten months old, who had never had the disease. When I told her of the danger, she said: "I am not afraid of scarlet fever." I do not think the majority of the lower classes about this city, and the same is probably true of other cities, have any idea of the danger of infection in these diseases. Since the Women's Club has taken the matter up, we may be able to get a resolution passed through the City Council looking toward the isolation of cases, placarding houses, etc.

It seems to me that the question of immunizing our children against diphtheria, and the treatment of diphtheria, are two separate and distinct things. There is no doubt in my mind that the proper treatment of a case of diphtheria during the first two or three days is to use antitoxic serum; the whole trend of investigation goes to show that where cases are recognized early, that antitoxin is almost a specific.

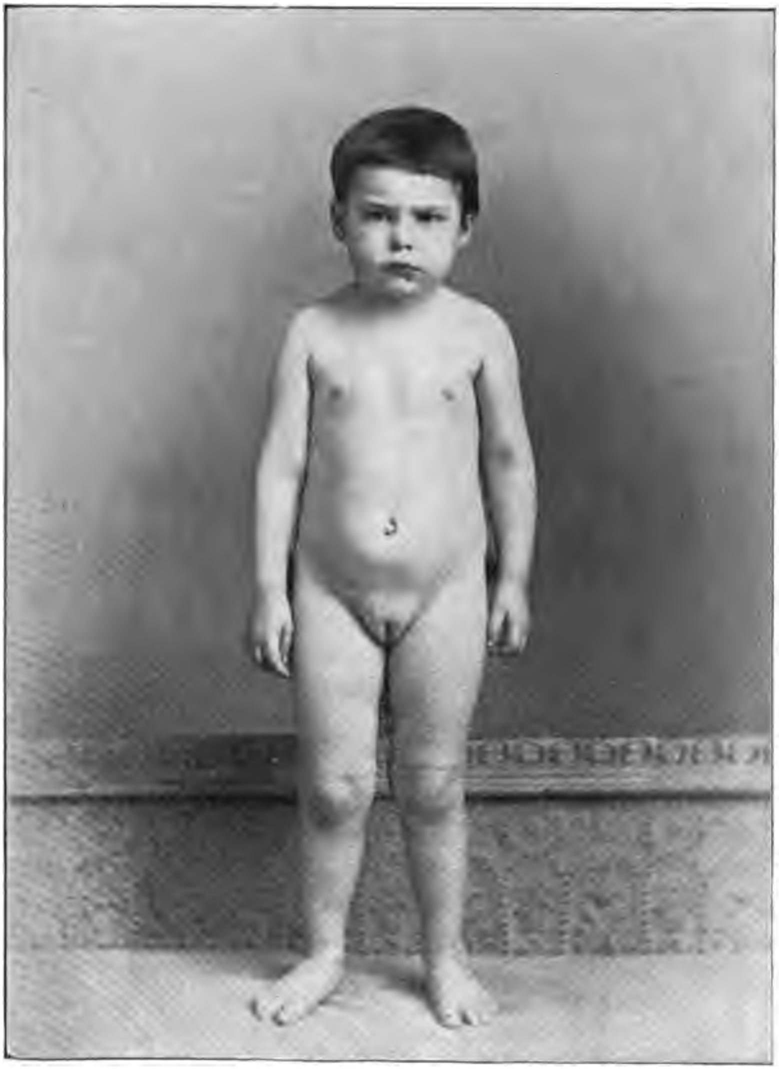
We do not know as yet what permanent effects serum injections produce upon the system, and it would be better to watch these cases for some months or years to decide as to the harmlessness of the serum therapy. In true diphtheria we can afford to run some risk on account of the imminent danger of the disease, and I would unhesitatingly use the antitoxin, but I would object to the unnecessary employment of an agent that we are as yet experimenting with. In a family we can watch the other children closely enough to inject serum at the first symptoms of diphtheria, and in such instances the antitoxin will be curative in perhaps 99 per cent of cases.

DR. WM. CHEATHAM: In closing the discussion, said that he had not lost faith in bacteriology, but brought up the subject for the special purpose of calling attention of physicians to the importance of isolation in these cases, although the bacteriologist may not always find the bacillus of diphtheria. Another reason was to show that the administration of antitoxin did not produce albumin in the urine, and to call attention to the fact that the time of immunization had been increased. If a case of diphtheria occurs in the family where there are several children, and we cannot isolate them, it is well to use antitoxin for the purpose of immunization. The diagnosis is not always easily made from the clinical symptoms; several cases have been reported where, from all clinical symptoms, they seemed to be follicular tonsillitis, but in the light of bacteriological examination they were proven to be true diphtheria.

The remarks made by Dr. Irwin rather surprise me. If we were to follow him in bacteriology we would go back about fifty years. He says the only effect antitoxin has is to assist in getting rid of the membrane. I think it is very important to get rid of the membrane; certainly if we do this we also get rid of the bacilli. Contrary to Dr. Irwin's remarks, I have seen a temperature of 104 F. reduced in twelve hours to normal under the use of antitoxin. In almost every case antitoxin has the effect of bringing down both the pulse and temperature in addition to its influence in ridding the throat of membrane. I was surprised also to hear him say that he would inject antitoxin in the case of his neighbor's child, but would not in his own. My practice has always been to use nothing on my neighbor's child that I would not use on my own.

The First Anatomical Theater was erected in 1549. Labrizzio built it in Aquapend, Padua, at his own expense, and we are told that in order to properly pursue the dissections it was necessary to employ torches as artificial light, owing to the height and darkness of the building.—*Meyer Brothers Druggist, 1895, xvi, 493.*

Knives should never be placed in carbolic lotion, for even a diluted solution of the acid quickly impairs their edges.



TUBERCULOUS DISEASE OF THE SHOULDER JOINT.

THE CRAIG COLONY FOR EPILEPTICS.

BY FREDERICK PETERSON, M. D.

Attending Neurologist to the City Hospital, Blackwell's Island; Chief of Clinic, Nervous Department, Vanderbilt Clinic, College of Physicians and Surgeons, New York; President of the Board of Managers of Craig Colony.

A KNOWLEDGE of the peculiar needs of epileptics, gained by me during several years' experience in one of our large asylums for the insane, and a subsequent visit to the great colony for epileptics in Germany (Bielefeld), which I described in the *New York Medical Record* in the spring of 1887, led me to seek to establish in this country a colony of this kind which should rival, if not surpass, its foreign prototype. To this end legislation was begun and carried on successfully until 1892, when the New York Legislature passed a bill empowering the Governor to appoint a Commission to select a site in New York State for a colony for epileptics; further legislation was required for its purchase and preparation for its benevolent purpose. It is now open, and the first patients have been received there.

THE SITUATION OF CRAIG COLONY.

Craig Colony, named for the late Oscar Craig of Rochester, formerly President of the State Board of Charities, consists of nearly 1,900 acres of land in the Genesee Valley. It is reached by two trunk lines of railways (the Erie and the Delaware & Lackawanna), and from roads centering at Rochester by the Western New York and Pennsylvania Railroad. The colony has its own post-office and railway station, known as Sonyea, an Indian word, signifying sunny place. The land is extremely fertile and beautifully diversified with fields, woodlands, meadows and glens. The farms, gardens and orchards are already in a high state of cultivation, and will yield this year an income of $12,000 to $15,000. It had already been a colony for fifty years, having belonged to a body of Shakers, who had built thirty to forty substantial buildings upon the tract for residences, shops and the like. The Shakers, having dwindled in numbers, disposed of the property to the State at less than half of its value; many of the buildings have been put into perfect order for their new purposes, and systems of electric lighting, water supply, sewerage and heating introduced. The illustrations presented show some of the buildings which are now in use.

THE PLAN OF THE COLONY.

The law establishing the colony required that it should be

SOME OF THE BUILDINGS OF CRAIG COLONY NOW OCCUPIED BY PATIENTS.

arranged on the village plan. To this end the services of Frederick Law Olmsted, the landscape architect, were secured by the Board of Managers, and he has prepared the scheme of an industrial and agricultural village upon the best principles. There are already many buildings upon the grounds (some thirty or forty), which are to be immediately utilized. Craig Colony will not resemble an institution in any particular, but will look more like a country town than anything else. As the patients are received, they will be set to work or at study in various ways. They will take care of the farms, gardens, and orchards ; they will plan and build new houses. There will be among them tailors, shoemakers, printers, bookbinders, masons, ironworkers, carpenters, painters, and so on. In fact, every sort of employment, every sort of recreation, everything in short that goes to make up the life of a country village will be found in this colony, the only difference being that the citizens of this community will be epileptics.

NEED FOR PROVISION OF THIS KIND.

Epilepsy is a peculiar disease, characterized by loss of consciousness and a convulsion. The fit or epileptic seizure occurs from time to time, and may last from a few seconds to a few minutes, sometimes longer. Some patients have fits every day or oftener some once a week, some once a month, some only once or twice a year. It is only during the fits that they are incapacitated. At other times they are well and strong and healthy looking, and quite as able to work and study as are other people. But the fact that they have these fits, no matter how rarely, debars them from many of the privileges enjoyed by their more fortunate brethren. They will not, on that account, be received into the public schools and can receive no education. They cannot attend church or social gatherings. They are shunned by their playmates, and they become burdensome to their families. When they grow to adult life no one wishes to employ them, so, although they are able to learn a trade or profession, the shops and colleges are closed against them. No general hospital receives them as patients, and, in fact, there is no place at all which is open to them except an almshouse or an insane asylum, and as the insane asylum is better than the almshouse, many patients are sent there in preference to a poor-house.

According to the latest statistics there are now in the State of New York over 800 epileptics ready to enter the colony as soon as they can be accommodated.

VIEW OF GORGE WHICH DIVIDES CRAIG COLONY INTO TWO PARTS—ONE FOR MALES AND ONE FOR FEMALES.

THE OBJECTS OF THE COLONY.

In accordance with what has already been stated, we may summarize the purposes of such provision for epileptics as follows :

First.—To give them schools where they may be educated as other children and young people are.

Second.—To afford them industrial training in any sort of occupation they may desire to follow.

Third.—To provide those epileptics a home to whom all other doors are closed.

Fourth.—To treat every case of epilepsy according to the best known scientific methods.

THE ECONOMY OF THE SCHEME.

The resources of the land are such that almost everything in the way of food for the inhabitants of this unique village can be raised by themselves, and their surplus agricultural and manufacturing products, judiciously managed, can make the colony practically self-supporting. Thus the large number of patients already upon public support in this State are to be no longer a burden to the taxpayers.

RESTRICTIONS AS TO THE KIND OF CASES RECEIVED.

There will be no restriction as to the age of patients admitted, and the only restriction practically applies to the mental condition. Insane epileptics, or epileptics subject to insane outbreaks, cannot be taken into the colony.

STATE PATIENTS.

The patients taken from the almshouses and asylums will be known as State patients, and they will be provided for before any private patients can be received. They will be sent to the colony by the poor authorities of each county according to a form required by law, the blanks for which will be furnished on application to the State Board of Charities or the superintendent of the colony.

PRIVATE PATIENTS.

As soon as all epileptics now upon public charge eligible for admission to the colony are provided for, private patients will be received at prices to be regulated by the Board of Managers, according to the kind and extent of care and attention required. Such patients may, if it be desired, erect cottages for their own use upon the grounds, upon application to the Board of Managers.

THE STUDY OF EPILEPSY.

Not the least important among the purposes of the Board of Managers is the idea of making the colony the seat of clinico-pathological investigations of a high order. To this end a pathologist is to be appointed whose sole object it will be to discover, if possible, the causes of this widely prevalent and almost irremediable disease, in order that one day a cure may be found for the majority of patients affected with epilepsy, in the place of the less than six per cent of cases that nowadays yield to treatment.

DONATIONS TO THE COLONY.

The law permits the Board of Managers to take and hold in trust for the State any grant of land, gift or bequest of money, or any donation to be applied, principal or income, or both, to the maintenance and education of epileptics and the general uses of the colony. Charitably disposed people have here an opportunity for the beneficent use of money, and it is hoped that memorial buildings in the way of chapel, library, museum, gymnasium, school, shop, or cottages, bearing the donors' names, may in time be erected.

OFFICERS OF CRAIG COLONY.

The State Board of Charities has jurisdiction over this colony. The Board of Managers consists of Dr. Frederick Peterson, President, 60 West Fiftieth Street, New York; Mrs. Charles F. Wadsworth, Geneseo, N. Y.; H. E. Brown, Mount Morris, N. Y., Secretary; W. H. Cuddeback, Buffalo, N. Y.; Charles E. Jones, M. D., Albany, N. Y.; L. S. Oatman, Buffalo, N. Y.; Judge O. P. Hurd, Watkins, N. Y.; Jeanette B. Hawkins, Malone, N. Y., and Mrs. Salmon, Syracuse, N. Y. The Medical Superintendent is Dr. William P. Spratling; Assistant Physician, Dr. L. Pierce Clark; and Matron Miss Elizabeth Holt, a graduate of the New York Hospital Training School for Nurses.

The Superintendent may be addressed at Craig Colony, Sonyea, N. Y.

Child Suicide in Paris.—In Paris of late there have been several suicides of children. The youngest of these was only nine years of age. The child had been missing for a week when his body was found in the Seine. On it was a paper on which was written, "My name is Alfred Fournot. I am killing myself. My father has scolded me."—*Ann. Hyg., 1896, xi, 43.*

SULFONAL IN ENURESIS.

By J. Madison Taylor, M. D.
Philadelphia.

CONTINUED studies of enuresis lead me to believe more strongly that the essential factor is an instability of nervous equilibrium, and the instrumental cause may be one of many reflex irritants. Wetting the bed at night never occurs in an entirely healthy child. The act of unconscious urination probably always takes place during partial or shallow sleep. The most successful single agent in my hands is sulfonal, taken at night in a large dose (6 to 10 grains), and it may be during the day, in smaller doses, as well (2 to 4 grains, two or three times a day). My recent results have been most encouraging.

Practical Notes.

A New Healing Serum.—Dr. Marmorek, a young physician of Vienna, after four years of bacteriological research, has succeeded in cultivating a healing serum that is not only efficacious in the cure of erysipelas, but is equally so in infectious connective-tissue inflammations, infectious bronchitis, and even in puerperal fever. The serum is a product of the streptococcus, cultivated along the same lines as the antitoxin for diphtheria. The investigations have been made in the Pasteur Institute in Paris, and have been observed with great satisfaction by some of the leading physicians of that city. Dr. Marmorek is quite satisfied with the results of the injection of this serum, but believes they are more particularly promising in post-mortem wounds and those infectious punctures so often received in surgical operations. This serum, in the hands of Dr. Chautemesse, gives, for erysipelas, a mortality of 2.59 per cent, based upon 500 cases, as against 3.79 per cent for 554 patients treated by the most approved methods without serum injections. The general condition improves some hours after the operation; nervous manifestations, and especially the delirium, are very favorably influenced. —*Med. Rec., 1896, xlix, 92.*

Burns in Children.—The following is the plan of treatment followed at the London Hospital: The child is wrapped in a blanket without being undressed, the blanket being secured around the neck and chest with safety-pins. The bed is moved before a fire, hot-water tins placed in it, and a screen placed behind it to protect from draughts and to reflect the heat upon it. To minimize shock from pain, *opium* is given at once, from 4 to 5 minims (0.26 to 0.32 gramme) of the tincture for a child of 2 or 3 years old, with about 2 drachms (8 grammes) of *brandy*. Should the child still be crying at the end of an hour, a further dose of 3 minims (0.20 gramme) is given. When the patient awakes the screen is drawn close, one burned part after another rapidly exposed and dressed with *zinc ointment* and *cotton-wool*, and the blanket once more wrapped around the body. The dressings are changed in four days, when suppuration commences, preparation for which has been made in the meantime by giving *tincture of opium*, in doses of 2 or 3 minims (0.14 or 0.20 gramme) every fourth hour, to induce sleep and prevent restlessness and friction, overdose being guarded against by never waking the child to give it its medicine. Thirty minims (2 grammes) of *brandy* are given every hour, with as much food as circumstances will allow after the first morning. When suppuration has set in, daily dressings, plenteous food, and *brandy* are relied on, with *opium* if there is much pain or restlessness. Diarrhea is combatted from its very inception with *bismuth carbonate*, 10 grains (0.65 gramme); *ipecacuanha wine*, 3 minims (0.20 gramme); *tincture of opium*, 3 minims (0.20 gramme); *mucilage* and *dill-water*, 2 drachms (8 grammes) every fourth hour. Aperients are never given for constipation, but enemata, as in measles.—HARRY FENWICK and H. L. BARNARD, *British Medical Journal*,—*Univ. M. J.*, *1896*, *x*, *27*.

A Treatment of Whooping Cough.—Joire of Lille (*Lyon Med. No. 24, 1895*) obtains good results in whooping-cough by means of a treatment which consists in giving to the child morning and evening six to ten drops of oil of fennel, which are poured on a lump of sugar, and in wrapping the patient in a sheet soaked in a warm decoction of fennel seed.

The latter is prepared by boiling for an hour as many handfuls of fennel seed as we need liters of water. The bed is then covered with a woolen blanket, and a sheet is soaked in the decoction, slightly wrung out and placed on the woolen blanket. The patient is then laid upon it and wrapped up from the neck to the feet, both in the sheet and blanket. After the lapse of an hour and a half the child is rapidly placed in a dry bed. This is repeated every day. It produces an energetic cutaneous revulsion which has an excellent effect upon the bronchial catarrh, as well as upon the spasmodic element of the whooping cough.

Thanks to this treatment, which the author has employed in a large number of cases, a cure is commonly obtained in from eight to ten days, fifteen at the most and without complications.—*N. Y. Therapeutic Review.*

Pilocarpine as a Prophylactic in Diphtheria.—Some ten years ago the use of pilocarpine was advocated by a number of more or less enthusiastic observers as a curative agent in diphtheria. But the vaunted specific effects of this drug were not sustained by the general verdict of the profession. A Hungarian physician, Dr. Sziklai, has again taken up the jaborandi alkaloid, and on the strength of his observations recommends it in the *Wiener Medizinische Presse* as an efficient prophylactic in true diphtheria, as well as in pseudo-diphtheritic affections and croup. He urges the employment of pilocarpine, more particularly in families where one case of diphtheria has already appeared, and he evidently prefers its use to that of antitoxin. He believes that pilocarpine may actually prevent the formation of false membranes. As a safe prophylactic he advises a one per cent solution to be given in ten-drop doses three times a day. For infants less than one year old half this quantity is sufficient. Dr. Sziklai has never observed any untoward effects from pilocarpine, and believes its use in diphtheria will yet come to be regarded in the same way that quinine is looked upon in malaria. —*Med. Rec., 1896, xlix, 103.*

The Radical Cure of Hernia in Children.—Dr. Broca, of Paris, has performed the radical operation for the relief of hernia in children under fifteen years of age in 450 cases. Only one death occurred in this series of operations, and this was due to septic peritonitis. Of the total number of cases reported, 14 were umbilical hernias. The others were inguinal hernias, 41 in girls and 395 in boys. Dr. Broca urges that, whenever possible, the operation should not be performed until the infant has been weaned. But operations for strangulated hernia have been successfully done on infants a few days to several weeks old. The technique of the operation is the same as in adults. The time needed for its performance is generally only about ten minutes.—*Lyons Medical,—Med. Rec., 1896, xlix, 103.*

For Eczema.—Do not wash the lesions with water, but keep the skin clean by wiping with sweet oil. The crusts should be carefully removed with an alkalie or oil, and then the following ointment applied :

℞ Ung. picis..............
Ung. diach.............
Ung. zinci oxidi......... āā ℥ ii
Mix. Sig. Apply externally.

Editorials.

WEAK ANKLES.

CERTAINLY in New York, and presumably in other large cities, weak ankles are one of the commonest of children's affections, and yet, unless of severe grade, they arouse little interest, and are usually, if noticed at all, put off with perfunctory treatment. The most popular remedy with the laity—and we fear that the profession is not entirely blameless—is the abomination known as the stiff-ankled or corset shoe, which is prescribed with a looseness and prodigality simply amazing, for any crippling disorder below the waist line. In the case of young children, brought for lameness, crookedness, or weakness of the lower extremities, to the public clinics, fully three-quarters, on a moderate estimate, come wearing stiff-ankled shoes, purchased on the advice of some interested friend, and without reference to the seat or nature of the difficulty. The advice invariably given by the writer, whether the trouble is in the ankle or not, is to discard them for shoes of the ordinary kind, properly selected and fitted.

Weak ankles are commonly a local expression of general lack of vigor and laxity of fibre—a stigma of physical degeneration—due frequently to the restrictions of city life, both general and local. In all cases they are the expression of a disproportion between the superincumbent weight and the resiliency of the structures upon which it impinges; the weaker side gives way and the foot rotates out, passes into the position of abduction, and the arch lies nearer the ground. In this position the weight of the body is no longer transmitted through the center of the ankle and foot, but falls to the inner side, tending to aggravate the evil and also to bring undue strain upon the internal lateral ligament of the knee, and thus to produce knock-knee. Such a foot is an imperfectly developed foot, or, as Dr. Royal Whitman characterizes it in his admirable study in the New York *Medical Journal* last November, a "weak foot." While the tendency is toward abduction, the toes do not always point out, for the child may instinctively "toe in" to avoid the strain of the opposite position; so that weak ankles, tending naturally to abduction of the foot, are a common cause of "pigeon toes." This instinctive maneuver is protective in its tendency and affords a hint for treatment. If the foot is slightly inverted by raising its inner border, the line of impinging weight will fall in its normal position, near the middle of the foot. This can be done by adding a strip of leather, one-quarter of an inch thick, to the inner border of a well-fitted laced shoe. If the patient is delicate, as is usual, the general nutrition must be improved by better diet, less study and more exercise in the open air; and, in any case, the foot must be educated and trained by appropriate local exercises. If such measures are systematically and skillfully applied before the case has become inveterate, severer measures will not be required. The stiff-ankled shoe, though no doubt a commercial success, is a clog and a hindrance to successful treatment, and should be consigned to the armamentarium of those sapient beldames of both sexes, who never know what is the matter, but invariably know what to prescribe.

HENRY LING TAYLOR, M. D., New York.

TIC DE SALAAM.

A CONVULSIVE form of disease, little known and but rarely described in this country, is the form of epilepsy known to the French writers as Tic de Salaam, a condition which is observed almost exclusively in first infancy. Text-books of pediatrics in the English language contain no reference to it, either under this name or any other. Two or three cases which have recently come under the observation of the writer prompt him to a few remarks anent this condition.

In the forms usually observed, the disease is made up of a series of rapid, oscillating movements of the head and superior part of the body (spasmus salutans), which occur with a rapidity varying from 10 to 30 times per minute. In some instances, during the height of the attack, the upper extremities are shot into the air, and for the moment remained fixed, while the eyeballs are rolled up, and the face has a fixed, non-expressive appearance. Whether or not consciousness is entirely lost during this period cannot be said with certainty—first of all, because of the tender age of the patient, and secondly, because the rapid, fluctuating movements prevent the patient from answering or communicating. In marked contrast to the ordinary epileptic convulsions, whether they be of the "petit mal" or "grand mal" form, is the absence of any warning, and the rapidity with which the little sufferer regains his composure after an attack—that is, there seems to be none of the customary drowsiness, stupidity and desire to be left severely alone, as after an attack of epilepsy. Apparently is there no tendency to failure of mental development, or loss of what psychical faculties the child may have already obtained. The number of attacks which the patient may have in 24 hours varies from a dozen up to fifty or sixty, each attack lasting from one to three or four minutes. The phenomena have all the characteristics of a motor explosion or liberation of energy. Their occurrence is brusque, a rapid cessation between each twitch and an abrupt departure. The consensus of opinion of those who have seen most of this condition is, that the disease is a modification of the "haut mal," and the treatment which seems most serviceable is the treatment applicable to that form—namely, the persistent administration of bromide of potassium, with the occasional administration for a few weeks of minute doses of opium, while at the same time persistent attention is directed to the regulation of the alimentary and emnuctory functions.

JOSEPH COLLINS, M. D., New York.

Hard on the Manufacturers of Artificial Food.—At the Congress for the Protection of Children, sitting at Bordeaux, France, a resolution was adopted to the effect that artificial food should be forbidden in the case of infants under six months of age, that from six months to twelve months of age the food should be milk with a little farinaceous material or the yellow of eggs, and that from one to two years the diet should consist of milk, eggs, mashed vegetables, tapioca and a little boiled fish. The feeding bottle with india-rubber tubing was unanimously condemned.—*Meyer Brothers Druggist, 1895, xvi, 519.*

Society Report.

NEW YORK ACADEMY OF MEDICINE.

GENERAL MEETING, JAN. 16, 1896.

EMPYEMA.

The Bacteriology of Empyema in Children.—DR. HENRY KOPLIK said that the purulent pleurisies of childhood might be divided, according to their mode of infection, into (1) metapneumonic; (2) streptococcus empyemas; (3) tubercular infections, and (4) fetid empyemas. In fifteen cases of empyema occurring in children he had found in nine the diplococcus of pneumonia in pure culture. Where the streptococcus variety is associated with a severe septic infection, as scarlet fever, the prognosis is much more grave than in the other forms, although, of course, the tubercular empyemas almost uniformly present a bad prognosis. These tubercular empyemas were associated with very marked thickening of the pleura. The fetid empyemas should be subdivided into (1) those in which there is a streptococcus or pneumococcus infection, and (2) those in which there is a mixed infection. Those empyemas which seek to cure themselves spontaneously by perforation through a bronchus are particularly apt to be of the fetid variety. According to Gerhardt, most of the pleurisies occurring in children are purulent, and it has been estimated that fully two-thirds are metapneumonic.

The Diagnosis and Peculiarities in Children.—DR. AUGUST CAILLE said that empyemas in children were usually secondary, and exposure to cold could only be looked upon as a predisposing factor in their causation. Out of 80 cases coming under his observation, 67 had been in children under five years of age. The quantity of pus was often very large—one to three pints. The physician should not rely upon the presence of peptone in the urine, or, indeed, on any sign or symptom, as indicative of empyema, except the withdrawal of pus by means of an aspirating needle. The constitutional disturbance is often very slight; thus, he had once seen a boy playing around in the street, yet his thorax was found to contain two pints of pus. One should always bear in mind the occurrence of hydrothorax as a sequela of disease of the lungs or of the kidneys. In a simple pneumonia, the child would cry readily, without giving evidence of pain; but, in pleuro-pneumonia, not only the cry, but the cough and the respiration would bear evidence that they were painful. The physician was thus enabled to note the change from a simple pneumonia to a pleuro-pneumonia. On inspection, the physician would observe in pleuritic effusion a bulging of the affected side, a bulging or retraction of the intercostal spaces on inspiration, dyspnea, and, possibly, displacement of the heart. It should not be expected, however, that all these signs and symptoms would be found in every such case. Lateral curvature of the spine might be observed in old cases, and particularly where there had been a sinus for a considerable time. The fever was apt to be irregular, and, as in cold abscesses in other regions, might not be present at all. Palpation should show bulging of the intercostal spaces and absence or diminution of vocal fremitus. The fremitus might only be diminished as compared with another part of the chest, and its detection could not be accomplished unless the child were made to cry—by pinching it, if necessary. If the layer of fluid between the lung and chest wall were sufficiently thick, auscultation would indicate an obscuration of the respiratory sounds, but tubular breathing might be heard all over the area of fluid effusion, being transmitted from inflamed or compressed lung. Diminished vesicular breathing and fremitus with dullness would indicate a thickening of the pleura. If the quantity of effusion were considerable, egophony might be heard in the axillary line. Bronchophony would be audible over consolidated lung, but not over fluid. Percussion would indicate flatness, and in addition to this would convey to the finger a peculiar sensation of resistance; but very forcible percussion might reveal instead the resonance of the underlying pulmonary tissue. When there is sufficient fluid to compress the lung into the upper part of the thorax, the lower area will be flat on percussion, and the respiratory sounds will be absent, whereas in the upper portion of the chest the respiratory sounds will be augmented. The change of level of the fluid resulting from a change in the position of the patient is not very easily detected in small children. The crucial diagnostic test was the insertion of an aspirating needle, and this should be done with aseptic precautions. A serous exudate mixing in the syringe with a few drops of an antiseptic solution might assume an appearance not unlike that of pus, hence when at all in doubt as to the nature of the fluid drawn into the syringe, this should be examined with the microscope. After the withdrawal of the needle, the site of the puncture should be covered with a bit of adhesive plaster, or with a small piece of gutta-percha tissue which has been made sticky by moistening it with chloroform. If the precaution is taken not to puncture the chest on the right side below the eighth intercostal space, there will be no danger of injuring the liver. As regards treatment, it should be remembered that, although there may be a perforation into a bronchus, the pus might not find an exit until the intra-thoracic pressure had been relieved by an incision into the chest. The re-inflation of the lung after such an opening had been made into the chest was accomplished by the mechanical effect of coughing or forced inspiration, which causes the air to be driven in the direction of least resistance, which in this case is from the sound to the diseased lung.

The Treatment of Empyema in Children.—DR. JOSEPH E. WINTERS said that the indications for treatment were, to remove the pus, prevent its re-accumulation, procure full expansion of the lung, and leave no deformity of the chest. It should be borne in mind that empyemata do not heal from the bottom, but by the expansion of the lung and the ascent of the diaphragm. It was by this expansion of the lung that the pus was expelled, and therefore any method of treatment prior to operation which would tend to reduce the intra-thoracic pressure was injurious. Rib resection in recent cases was, in his opinion, not demanded, for the object of this operation is to cause a falling in of the chest wall, and this we did not desire until the full expansion of the lung had been accomplished. The incision into the chest should be at least two inches long, and should be made from two to three inches above the base of the normal thoracic cavity. Where there was no cyanosis, it was well to use an anesthetic, and chloroform was preferable for this purpose. The patient should only be partially under the influence of the anesthetic, however, for it was desirable that the expulsion of the fluid should be aided by coughing and crying. Before making the incision an aspirating needle should be introduced into the chest, and if fluid were found the needle should be allowed to remain as a guide to the operator. It was safer for the patient and more easy to secure a thorough emptying of the pleural cavity to have the patient lying on the affected side and close to the edge of the table. After evacuation of the fluid, the speaker favored careful irrigation of the cavity with hot water, in order to remove any coagula that might be present. He also recommended that as soon as the incision had been made the child should be given a teaspoonful of whiskey, undiluted, in order not only to stimulate the child but to make it cough and cry. Convalescence could be hastened and aided by the use of chest exercises, and good results had been obtained by blowing on wind instruments.

Dr. A. Jacobi said, that while less was now heard of "chronic pneumonia" than formerly, it should be remembered that it was not at all uncommon in children to find a pneumonia followed by a peribronchitis, as evidenced by a persistence of fever and dullness for perhaps several weeks.

Dr. B. Scharlau said that a perusal of his hospital records for the past five years showed that he had performed rib resection for empyema over one hundred times, and he preferred this method to simple incision, because it was more in accordance with the principles of treatment of other abscesses, and because he was convinced that convalesence was much more rapid. Moreover, in about fifty per cent of all cases of empyema there would be found coagula so large that they cannot escape through a small opening. Most of those who advocated incision only had never given rib resection a fair trial.

Dr. W. P. Northrup said that he considered it a most difficult diagnostic problem to decide in a child under eighteen months old whether a one-sided flatness were due to fluid or to pneumonia, unless one resorted to the use of the aspirating needle. Probably the most important physical signs were one-sided dullness and absence of vesicular breathing. In employing the aspirating needle one should be particular to select one having a very large calibre, and to insert it in at least three different places, if at first the puncture is negative. His experience had taught him that the pleural cavity will drain perfectly, no matter how the drainage opening be made, but the sixth intercostal space was a convenient location. For children under two years of age he preferred to make the incision nearly two inches in length and to insert two drainage tubes side by side.

Dr. Henry Dwight Chapin said that empyema was a disease in which many children lost their lives from the attending physician failing to recognize early enough the true nature of the trouble. This was partly due to the fact that it frequently followed a pneumonia, and partly to the fact that in proportion to the youth of these little patients did the difficulties of physical diagnosis increase. It was not common, he thought, to find bulging of the affected side in children, unless there was a large quantity of fluid, for the reason that the pressure was exerted chiefly in the direction of the least resistance, which was on the lungs and not on the wall of the thorax. It was also usual to hear bronchial respiration all over the area of fluid. He agreed with the last speaker as to the necessity of resorting to exploratory puncture for differential diagnosis, and also regarding the use of a large aspirating needle. If the signs of a pneumonia persisted, or if in the course of a pneumonia we observed an area of dullness beginning at the apex, there was good reason for believing that this was due to effusion. He had employed resection of a rib in several cases, but had found, as others had done, that this operation was sometimes followed by a persistent sinus. As he had obtained very satisfactory results from simple incision he could not see the advantage of exsecting a rib, provided, of course, the incision were made ample enough to allow of the free escape of large coagula.

The PRESIDENT said that his experience had convinced him that the patients usually made a more rapid recovery after a portion of a rib had been resected than where only an incision was made into the chest wall.

DR. FLOYD M. CRANDALL remarked that this discussion had served to emphasize the frequency with which empyema in children followed pneumonia, and also that these purulent pleurisies were almost always secondary. He fully agreed with those who had previously spoken as to the difficulties of diagnosis, and thought it behooved us all to be charitable to those brother physicians who chanced to make such mistakes in diagnosis.

DR. CAILLE, in closing, said that irrigation of the pleural cavity was to be condemned, because it caused a breaking up of the adhesions between the lung and the chest wall. It had been very generally discarded, except in bad septic cases.

DR. WINTERS, in closing the discussion, said that he was decidedly opposed to exsection of a rib in children, not only because it was an unnecessary procedure in recent cases, but because in children under two years the mortality from this operation was 80 per cent, whereas the mortality following simple incision in children of the same age was only 25 per cent. During the past summer he had made personal inquiry regarding the practice in the European hospitals in this respect, and he had found that this operation had been for the most part given up. In his opinion the difficulties of diagnosis in cases of empyema occuring in young children had been rather exaggerated in this discussion. The sensation of resistance imparted to the finger during percussion was very characteristic, and if the examiner were careful to make the child take deep inspirations while auscultation was being practiced, a sound would be heard in cases of fluid effusion which was totally different from that produced by consolidation of the lung.

Abstracts.

BEHRING'S DIPHTHERIA SERUM.

F. J. B. Cordeiro (*Report of Surgeon General, U. S. Navy 1895—Sanitarian, 1896, xxxvi, 29*) says that diphtheria is generally accepted to-day as being of bacterial origin. One set of bacteriologists insist that the Löffler bacillus is the sole and only cause; another set that the streptococci, staphyloccocci, and micrococci that are so often observed stand also in the causative relation. Chaillou and Martin found in 64 cases that presented the typical clinical picture of diphtheria the following:

	Cases.	Deaths.	Mortality.
			Per Cent.
Löffler bacillus	33	26	78
Löffler bacillus and staphylococci	5	3	60
Small cocci	10	4	40
Streptococci	16	12	75

Löffler bacillus in 60 per cent of the cases. In another set of 99 cases of angina, with diphtheritic deposit, the same authors found the Löffler bacillus 71 times = 70 per cent.

Baginsky found in 93 cases of diphtheria the Löffler bacillus 68 times = 73 per cent. In another set of 154 cases given by Baginsky the bacillus was present in 118 = 76 per cent.

It is probable that on an average in about 70 per cent of the cases of clinical diphtheria will the Löffler bacillus be found. This has led to the following bacteriological distinction: those cases in which the Löffler bacillus is found are spoken of as genuine diphtheria; those cases in which this bacillus is not found are called diphtheroid. Clinically there is no distinction, and confusion may easily result, and has already resulted, in comparing the statistics of a former period, when no such distinction was made, with those of the present time. Escherich says: "Starting from the fact known to Bretonneau, that we can produce fibrinous membranes in the tracheas of rabbits by making them breathe ammonia fumes, one was led to believe that a very severe inflammatory process could be caused by atmospherical influences. For the majority of cases, however, we must fall back on bacteria as the originators of the disease, and bacteriological investigations have shown that besides the Löffler bacillus there are others that by their growth in the mucous membrane can produce membranous inflammation. In fact, Martin has described cases of croup both primarily laryngeal as well as secondarily, in which the Löffler bacillus during the whole sickness could not be found, but instead a small coccus."

Concetti says: "Besides the genuine diphtheria produced by the Löffler bacillus there are other forms which present the same clinical and pathologico-anatomical picture as well as gland swellings, albuminuria, and paralyses. The conception of diphtheria cannot, therefore, be a simple one, but numerous different factors must be accepted as going to make up the pathologico-anatomical picture.

"Streptococci alone can produce this result. They are associated often with the Löffler bacillus and other micro-organisms, and working together present a terrible picture with the character of septicemia."

Diphtheria in men can be transferred to animals by scarifying and then rubbing in pieces of diphtheritic membrane. The micro-organisms take root and form a kind of fibrinous exudation which never leads to the death of the animals by suffocation. The poisons generated by the bacteria are soon absorbed and eventually lead to the death of the animal from paralysis, sepsis, etc.

If a pure culture of Löffler's bacilli alone is used, that part of the story which belongs to this peculiar bacillus is carried out. Thin fibrinous exudates are formed and death by poisoning results in due time.

If the pure toxin of the Löffler bacillus is used, which is obtained by filtering a two-days-old alkaline bouillon culture, no fibrinous inflammation follows, but the animal dies simply with symptoms of poisoning—paralysis, parenchymatous inflammation, etc. It is with such toxin that horses are immunized with a view to procuring a serum. The strength of the toxin is tested on guinea pigs; 0.02 cc. of a strong toxin will kill a 500-gram guinea-pig in about forty-eight hours. It may be necessary to begin the immunizing process with doses of 0.001 cc., which is gradually worked up to 100 cc.

The Testing of the Serum is done in the following way: Five guinea pigs of about medium weight are injected with the following quantities of the serum: No. 1 with 0.2 cc., No. 2 with 0.1 cc., No. 3 with 0.08 cc., No. 4 with 0.06 cc., No. 5, the control animal, is not injected at all. A short time afterward, six to twenty-four hours, they are all given 0.02 cc. of toxin subcutaneously, a dose which previous experiment has shown will kill a guinea pig of medium weight in about forty-eight hours. The following results then are noted: No. 5 dies in two days; No. 3 and No. 4 die a little later; No. 2 becomes sick, but survives; No. 1 is only slightly sick. 0.1 cc. of the serum, therefore, overcomes 0.02 of the poison, and a measure of its strength is thus furnished. Much more would be required to save the animal if the antitoxin were given after the toxin. Kitasato and Behring, in the case of tetanus, found that this increased in an extremely rapid proportion to the time. The unit of serum strength is taken always from an immunizing dose—*i.e.*, the strength is measured as above by giving the serum first and the toxin afterward. Ehrlich and Behring found that for tetanus ten times a minimum killing dose required ten times the immunizing dose of serum. I can find no record of such experiments with regard to diphtheria, and therefore suppose it has been assumed from the tetanus experiments. I cannot find any extended experiments, either, in the case where the poisonous dose is relatively large. It is possible that it may be found that a simple proportional law does not hold in such cases. For instance, if 0.1 cc. of the serum can antagonize 0.02 cc. of the toxin, it may not follow that 10 cc. can antagonize 2 cc. of the toxin, and the proportion may change again vastly when we attempt to antagonize the toxin after it has been given first. When we read on the label, therefore, of the Hochst serum, 600, 1,000, 1,500 immunizing units, we must not attach to such figures the same significance as when reading of a current of so many amperes, because our guinea pigs are very uncertain metres, and the proportional law of which we have spoken above may not be true.

The Influence of the Serum on the Membrane.—It is rather odd, but the serum of the highly immunized animals is a good culture medium for the Löffler bacilli, and the mucous membranes of such animals will allow colonies of the bacilli to grow as readily as those of the unimmunized. The only published experiment that I can find on the influence of the serum on artificially formed membranes are a few by Roux and Martin, who inoculated the mucous membranes of guinea pigs with a pure culture of Löffler bacilli and at the same time gave them a subcutaneous dose of antitoxin. The bacilli grew and fibrous membranes were formed, but no toxic symptoms were observed. This is of great importance clinically. In animal experiments the serum may preserve a life, because even though the membrane building goes on an animal never suffocates, while in a human being the danger of suffocation from an extension of the membranes is always at hand, and from the above it would seem that the serum has no effect on the membrane building. Let us see what facts we can collect clinically on this point:

Von Roncke (Munich) reports in a fatal case that "25 cc. of antitoxin in four doses after twenty-two days still left traces of the diphtheritic process."

Again, Von Roncke saw partial loosening of the membranes after several days, but remarked the formation of fresh membranes in spite of preceding injections of serum.

Godfrey, Saw, Walker and Bokai say that the membranes vanished rapidly under the serum treatment, but the cases they report are few.

Voswinkel says that he could see nothing of an earlier loosening of the membranes.

Körte, in most of his cases, saw no influence on the local process.

Hilbert saw no difference from the serum treatment.

Gallotti observed the separation of the membranes exactly as formerly.

Bender (Berlin) could see no sign of a specific healing influence on the membranes.

The following observers report a large number of cases where the local process increased or renewed itself in spite of serum injections: Rumpff, Sigel, Mendel and Katz, Weibgen, Kassowitz.

Gnändinger reports a case where, after having separated, the membrane renewed itself, and another where, in spite of the injections, the membranes kept spreading.

From the cases which I have observed I cannot notice any perceptible difference in the behavior of the membranes after the serum treatment. As before, in some cases they separate more or less slowly, in others remain stationary, and still in others grow worse.

The claim is made by Behring and his co-workers that the serum stops the spread of the membranes. The burden of proof lies with them then, and one case to the contrary carries more weight against this assertion than a dozen favorable cases.

The fact remains then that, in spite of the serum treatment, a large number of deaths are due to suffocation. It may be or it may not be that the toxin is to a certain extent combatted by the serum, but a far more potent poison than any toxin is here at work—namely, carbonic dioxide. The strongest dose of the strongest toxin will only kill a guinea pig after many hours, while a minute or two suffices after its larnyx is plugged to suffocate it. In a human being, and especially in a child, the calibre of the larynx and trachea is but very little more than the necessary minimum for the free supply of oxygen. Let this calibre be ever so little encroached upon and a struggle immediately ensues which cannot last long without exhausting, on the one hand, from the increased muscular effort called forth in breathing, and, on the other, from the gradual piling up of carbonic acid and other impurities.

Let us next consider from what we have learned of the serum from our animal experiments what we may reasonably expect of it when we transfer our experiments to human beings stricken with diphtheria in its clinical sense. Let us suppose a hundred cases of average diphtheria and consider what we may expect to work in these hundred cases with our serum. In the average, as about 70 per cent of all clinical cases show on examination Löffler's bacillus, we may consider that in 70 of these cases the bacillus is found and in 30 is absent. Only 70 cases, therefore, are available for our serum experiments. Let us suppose that the cases are treated by ordinary methods. The cases are of average severity, and we have a mortality of, say, 30 per cent. Of the 30 dead only 21 show the Löffler bacillus. From our previous tables we have seen that the deaths which can be ascribed to the toxin of the Löffler bacillus vary from one-thirteenth to one-sixth of the whole. To make the case as favorable as possible, let us take the greater fraction, one-sixth. Of the 21 fatal cases which concern us, about 3, say, could have been saved by the antitoxin. The antitoxin treatment, then, would have shown a mortality of 27 per cent instead of 30 per cent. That is supposing that our 1,000 or 1,500 immunizing units really could resist not merely 0.02 cc. of toxin, as in our animal experiments, but possibly 20 grams. A grave doubt exists whether or not the antitoxin when injected into the human being really antagonizes in part or at all the working of the toxin. These doubts are founded on the frequency with which post-diphtheritic paralyses are met after the use of the serum; so frequent, in fact, that Escherich, an advocate of the serum treatment, says that these paralyses occur oftener after its use than before. Here is a symptom considered on all sides as peculiarly due to the toxin of the Löffler bacillus, which, if the serum were an antitoxin in its real sense, it should be able to combat, but over which it is powerless. With a possible, not probable, betterment of 3 per cent from *à priori* considerations, let us see how this agrees with Behring's statement.

Behring said publicly in Vienna: "We now have it in hand to lower the mortality from diphtheria to a tenth of what it is at present, and by combining serum therapy with vaccination to save to their families and to the State countless lives."

Immunization.—Let us consider next the immunizing properties of the serum. We have here to deal with observations of such a character that one positive result outweighs a hundred negative. For instance, suppose that 100 persons are injected after having come into more or less close contact with diphtheria, and that none of them come down with the disease. This is a negative result. There is no way of determining whether or not such a result would not have happened without the serum. In fact we know from experience that contact with the most contagious diseases often does not reproduce them. But suppose that after carefully protecting a person with 1,000 or more immunization units, after every precaution has been taken, the individual comes down with diphtheria, in such a case we have more food for reflection than in the hundred cases mentioned above. Suppose we could cite one or two cases like the latter in regard to vaccination for small-pox, how long would such vaccination continue to be practised?

But for the antitoxin we can cite hundreds of cases where, in spite of serum, no immunization has been perceptible for an hour, or a day or a week, according to the various limits set by its upholders. Such cases have been reported by Sonnenburg, Strahlmann, Hager, Bokai, Schüler, Hilbert, and others. In the great discussion before the Berlin Medical Society Hansemann gave a whole list of such cases which had been reported to him by practising physicians. Perl (of Serett, Bukowina) reports that, out of 67 people who were immunized, 13 shortly after came down with diphtheria and 2 died. Then follows a list of diphtheria relapses—cases which have been treated with serum and seem to have recovered, when suddenly the membranes form again. Kossel, Wolff-Lewin (Berlin), Goebel (Hamburg), Gnändinger, and Widerhofer (Wien) have reported such cases. Wolff-Lewin's case was immunized with 600 units of Behring's serum, but a few weeks later took diphtheria, for which large doses of serum were again given, and after recovering took diphtheria again only twelve days later. Widerhofer's case was that of a child that had been treated with serum, relapsed, was treated a second time with serum, and notwithstanding died. Löffler bacillus was demonstrated in all these cases. In view of the above, it is difficult to see where the immunizing property of the serum comes in. Kossel has attempted to explain away these fatal objections, but to the mind trained only to the logic of mathematics and natural science and not deeply versed in metaphysics his reasoning is unintelligible.

Statistics.—We now come to the statistics of the subject, where, as usual, figures are made to prove whatever the writer desires. We may preface the discussion of this subject by stating what is well known to every physician that diphtheria at different times and places is an extremely variable disease in regard to its severity. Its mortality varies from 10 per cent (or even less) to 80 per cent. It is extremely fatal to younger life, chiefly from mechanical reasons, while among older children and adults it is comparatively harmless.

We find the following figures for the serum treatment:

MORTALITY.

	Per cent.
Baginsky gives	13
Bokai	14
Washburn	14
Constantini	22
Kossel	23
Widerhofer	24
Roux, Martin, Chaillou	26
Körte:	
First series	30
Second series	36
Gnändinger	40

We have here a range of from 13 to 40 per cent. Such results were often met with long before the antitoxin treatment came in; there is nothing at all extraordinary in these figures; they do not speak for the serum as a specific.

At Friedrichshain (Hahn) we have the following figures:

MORTALITY.

	Per cent.
1888	32
1889	34
1891, 1892, 1893	38
1894, February to November (serum period)	33

These figures are too varied and contain too many different factors to make a further consideration of them of any value. Some of them apply only to diphtheria in a bacteriological point of view—*i. e.*, only those cases where Löffler's bacillus was found are classified. The individual cases themselves vary much in severity. In a series where the light cases form a large proportion of the total cases the mortality must be very low, and that such is probably the fact in regard to some of the figures given above we shall see from what follows. Again, the character of the diphtheria endemic in Berlin, where most of these figures were obtained, has during the past year and winter been admittedly comparatively mild, so that a comparison of this year's figures with those of severer years would lead to error.

Gottstein has shown statistically (and his figures have not been questioned) that, during this last year, when the antitoxin has been so extensively advertised in the papers and the public attention so constantly fixed upon it, the number of cases of diphtheria received in the Berlin hospitals has been almost double that of former years. For instance, for the months of October and November of 1894 there were received 712 cases, while in the corresponding months in 1890 and 1891 there were received, respectively, 328 and 320 cases. There died during these months, however, in 1894 in the Berlin hospitals 131, while during these months in 1891 the deaths were about the same, and in 1890 only 124.

During the year 1894, then (the serum period), while admittedly the character of the endemic was comparatively mild, the number of cases of diphtheria received in the hospitals has been doubled. If this is a fact (and Gottstein's statements have not been denied) the reasons are twofold. First, the advertisement of the serum has led almost every case of sore throat to apply at once for treatment, particularly as one point has been continually harped upon—namely, the necessity for treatment at the very beginning; secondly, as every case of angina, many of them very light, has been systematically examined for the Löffler bacillus, and this has been found often in the lightest as in the severest cases, many cases have been treated with the serum that in other times, when the diagnosis was made clinically, would never have been heard of.

These many different and disturbing factors render the published statistics of the serum treatment untrustworthy. The combination of figures, also, from different hospitals—as in the case of Roux's and Kossel's figures—only increased the confusion.

We have, however, a criterion to appeal to which possesses none of the foregoing objections—the mortality statistics for diphtheria. I shall consider here the mortality tables for Berlin, because the serum originated there, was first tried there, and has been in extensive use for a longer time there than in any other city. Experiments were made with the antitoxin in Berlin in the early part of 1893, and at different periods during the year in the Elizabeth-Krankenhaus, in the Charité, and in Moabit. In March of 1894 it was systematically taken up in the Kaiser und Kaiserin Friedrich Children's Hospital, and with but a single break followed out through the year. From September to the end of the year it has been in general use in

Berlin, both in hospital and in private practice. Let us see if the mortality shows any signs of dropping to one-tenth of its former figures, as Behring promised, or if it has diminished at all.

Number of Deaths from Diphtheria and Croup in Berlin.

1881	1,593
1882	1,913
1883	2,651
1884	2,446
1885	1,802
1886	1,535
1887	1,304
1888	1,070
1889	1,252
1890	1,549
1891	1,057
1892	1,405
1893 (serum period)	1,643
1894 (serum period)	1,430

The latter two years, during which the serum was introduced, do not show any remarkable diminution in the mortality. It is noticeable that during the period 1882 to 1885 a severe epidemic raged ; outside of this period the mortality does not vary much. We can certainly say that for 1894 the endemic was of an average mild character, and we have no reason to believe that without the serum the mortality would have been different from what it was. The fact stands, then, that from *à priori* considerations we expected a small reduction of the mortality from diphtheria from the use of the serum, but that practically no such reduction is perceptible.

The verdict cannot yet be given that the serum is absolutely without effect upon the mortality from diphtheria, although everything points in that direction. The mortality statistics of another year at least will be needed.

In summing up, then, it will be well to bear in mind the following points which I quote bodily from Kassowitz :

"1. A large number of children treated with both small and large immunizing doses have within a few weeks acquired diphtheria, and some of them have died of it. We do not possess a single scientific proof that a case of diphtheria was ever prevented by the immunizing process.

"2. Children who during a first sickness have been treated with large doses of serum have a short time after acquired diphtheria anew. They were not rendered immune either by their sickness or the largest doses of the antitoxin.

"3. In a large number of cases children have been treated on the first or second day of their illness with the fullest doses of the antitoxin and have died.

"4. It is certain that a large part of those who have died, notwithstanding the serum treatment, did not die from the effects of a mixed infection, but directly from the specific effects of the Löffler bacillus.

"5. Heart and other post-diphtheritic paralyses are also seen in early and fully treated cases, and they occur as often as they did before the serum treatment.

"6. Of a fever fall by crisis in the first twenty-four hours and of a pronounced antipyretic effect of the serum most observers have seen nothing or next to nothing.

"7. The separation of the membranes follows in the cases that run a favorable course in the customany manner. But often there is an extension of the local process and a renewal of the already separated membranes during and after the serum treatment."

The burden of proof lies with Behring and his co-workers. The world will eagerly and only too willingly receive this proof. We know that the former extravagant promises are out of the question, but we should be grateful to have it demonstrated that the serum can reduce the mortality by even 1 per cent. As yet we have not the slightest basis on which to found an expectation that fewer children will die in the future of this disease on account of the serum treatment.

A SERUM CONTAINING THE DIPHTHERIA AND STREPTOCOCCUS ANTITOXINS, OBTAINED FROM ONE HORSE IMMUNIZED AGAINST BOTH INFECTIONS.

In arriving at the value of antitoxin in the treatment of diphtheria, it has become manifest that the cases which do not respond to the treatment satisfactorily are those in which there is a mixed infection; in complicated or septic diphtheria the serum has in a measure failed. The following communication of Dr. Roux to the Medical Congress of Buda-Pesth illustrates this:

"The diphtheria associated with or complicated by the presence of other bacilli, *especially the streptococci*, are among the most severe to be seen. Most frequently the disease involves the lungs, which, at autopsy, show foci or broncho-pneumonia, wherein are found the diphtheria bacilli and the streptococci.

"The association of these two microbes produces in rabbits a diphtheria running a rapid course, as seen in very young children. The anatomo-pathological lesions are the same. In both cases there is broncho-pneumonia with abundant bronchial secretion.

"*In these cases of associated diphtheria the serum but rarely cures.* This is not because there is a formation of larger amounts of diphtheritic toxins, or because the antitoxic actions are hindered, but because the cells that are stricken by the poison of the streptococci no longer feel the stimulation of the antitoxin."

Dr. Roux further quotes his experience with the various cases of diphtheria treated with serum at the Children's Hospital of Paris. There he found that while in pure diphtheritic anginas (unmixed infection) the mortality was seven and a half per cent, it amounted to thirty-four per cent in children where the diphtheria bacillus was associated with streptococci. When diphtheria has invaded the larnyx and tracheotomy has been resorted to, and when the diphtheria bacillus was not associated with streptococci, under the influence of the treatment the mortality was reduced from sixty-seven per cent to thirty per cent, but in the diphtheritic laryngeal cases, *in which the two bacteria were associated*, the death rate was sixty-three per cent, notwithstanding that the average injection of antitoxin during treatment amounted to 60 ccm.

European scientists have experimented in the direction of preparing a serum having antitoxic properties against both the Loeffler bacillus and the streptococcus, by immunizing the same animal against both poisons. The New York Pasteur Institute (Lehn & Fink, agents), following Marmorek's method and recognizing the importance of reaching practical results, has succeeded in producing a serum which is at the same time antitoxic against diphtheria and streptococcus infection by immunizing diphtheria antitoxin horses against the streptococcus virus. A period of one year is necessary to immunize a horse against streptococcus, an immunizing power of about 1:30,000 being reached.

The new double antitoxin is supplied in vials containing 25 ccm. and the directions are as follows:

One to 2 ccm. immunize against infection. In ordinary cases a dose of 15 ccm. is injected when the disease is suspected and before the diagnosis is absolute, and after a period of 12 hours the remaining 10 ccm. are injected. In severe cases the quantity should be 25 ccm. at first, 25 ccm. more within 24 hours, and even 100 ccm. can be injected within a few days, the serum being wholly innocuous. The injections are given subcutaneously, preferably in the lateral part of the abdomen, after the site of injection has been carefully washed with a four per cent solution of carbolic acid or a one per cent solution of lysol.

DIAGNOSIS OF DIPHTHERIA.

THURE HELLSTRÖM (*Hygiea, Univ. M. J., 1896, x, 19*) maintains that the clinical picture of a pharyngeal affection does not, in the majority of cases, permit of establishing a positive diagnosis, but that bacteriological examination may be relied on. Of 1881 patients admitted to the new epidemic hospital at Stockholm, from September, 1893, to August, 1895, with diphtheria or suspected diphtheria, the Loeffler bacillus was present in 1304 (69.32 per cent), while 577 (30.68 per cent) were free from it. In consequence of this the authorities omitted every measure of disinfection in the latter cases. In order to establish an absolutely certain diagnosis, Hellström made cultivations upon unmixed ox-serum—a simple and speedy method. He states that the presence of very small cocci is a good prognosis, while streptococci with diphtheria bacilli make the prognosis worse. Hellström claims to have proved that the long and slender bacilli are the real cause of true diphtheria, while the short and thick ones are of subordinate importance.

Of 664 scarlatinal patients examined, the Loeffler bacillus could be detected in only 13 (1.95 per cent). Convalescents, however, in whom the bacillus appears in later stages are dangerous, as true diphtheria contagion can be disseminated by them. Hellström never found the diphtheria bacilli to be a cause of phlegmonous angina. In the majority of cases of croup diphtheritic infection is the real cause, but cases of croup occur which are not engendered by the Loeffler bacillus, but by cocci which, though infectious, warrant a favorable prognosis. In 17 cases of scarlet fever with croup in the later stages, and in numerous cases of measles with croup, diphtheritic origin was demonstrated in all but two cases, where only cocci could be implicated. The author mentions that, out of 15 tracheotomies for scarlatinous croup, 11 died, and, in 31 tracheotomies for croup after measles, 28 died.

The presence of the Loeffler bacillus in the throat of apparently healthy persons, who become immediately affected by true diphtheria, seems to prove that they are the real originators of the disease, and the author mentions several examples in which such seemingly healthy persons spread the contagion. From a great many observations he maintains that it is not the rule that in the lighter cases the bacilli pass away more rapidly than in the severer ones, but, on the contrary, bacilli surviving a long time after uncommonly light cases have shown a permanent virulence. It is also undoubted that in the severer cases the mucous membrane of the throat sooner ceases to be a fruitful field for their growth.

HYSTERICAL ANOREXIA IN A YOUNG GIRL.

Dr. A. A. Kisel (*Meditsinskoye Obozrenie, 1895, xliv, 22*) reports a second case of this kind, the first having occurred in a girl, eleven years old, the account of which was published in the same journal, No. 17, 1894. The subject of the present report was a girl, fourteen years of age, who was admitted to St. Olga's Hospital for Children, in Moscow, on April 12, 1895. At that time, according to the statement of her relatives, she had taken nothing, either solid or liquid, into her mouth for twelve days. The father of the patient had had syphilis, death occurring from pulmonary tuberculosis; the mother, a nervous invalid for many years, had committed suicide during an attack of

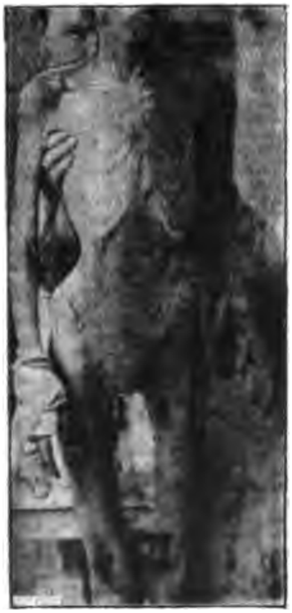


Fig. 1.

acute mania. The child had been perfectly healthy up to the age of nine years. At that time she had an attack of paralysis of both lower and upper limbs. There was no apparent cause for the trouble, which persisted in spite of the measures instituted for three months, when it suddenly disappeared, after the child had received a fright. Three years ago she again became paralyzed, this time in the lower extremities only. The trouble lasted six weeks, and again suddenly disappeared after a moral shock. For some years the patient had had a capricious appetite; a year ago she had begun to have frequent vomiting spells after eating; for the past three months apparently all the food ingested was vomited; and, as already stated, for the past twelve days she had taken absolutely nothing.

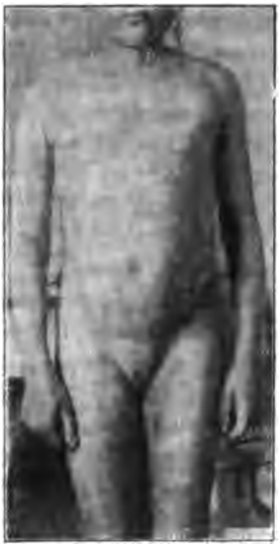


Fig. 2.

Upon admission into hospital, she was greatly emaciated, as shown in Fig. 1, her weight being only 18,200 gm. (40 lbs.), and this fell to 18,000 gm. in the course of the four days immediately following admission. After a long struggle, as a result of much persuasion, she was induced to take three dessertspoonfuls of milk, which she retained, although she complained bitterly of a severe pain at the pit of her stomach. It was remarked, however, that the child gave evidence of suffering only when some one of the hospital attendants was near her bed. Little by little she was induced to increase the allowance of milk, and so much progress was made that, by the end of a week, she was eating with a good appetite and apparent relish. She was weighed again on April 23, when she was found to have gained over three pounds; and at the date of her discharge from the hospital, 57 days after the lowest point in her weight had been reached, she turned the scales at 34,700 gm. (76⅓ pounds), a gain of more than 36 pounds, or considerably over half a pound a day. Fig. 2 shows the appearance of the child at this date.

The measures employed in this case were those which experience has shown to be best adapted to the management of hysterical affections in children, namely, complete change of surroundings, separation from relatives and friends, and gentle, but firm, insistance upon literal obedience to all commands of the physician or nurse.

A BOY WITH BILATERAL PERIPHERAL NEURITIS, APPARENTLY DUE TO ADMINISTRATION OF LIQUOR ARSENICALIS.

Middleton (*Glasg. M. J., 1896, xlv, 56*) reports this case: H. D., æt. 11 years, was admitted 4th June, 1895, with marked peripheral neuritis, affecting the four limbs, but not involving any other parts. Complete wrist-drop on the left, less complete on the right. Foot-drop well marked on both sides. Tenderness of calves and of balls of toes. Well marked atrophy and loss of knee-jerk. Absolutely unable to stand. No impairment of sensation.

History.—Towards the end of 1894 he had headache, general feeling of cold, followed by swelling of hands, face and feet, more marked at night, associated with scanty urine and white sediment mixed with blood. This statement of the parents must be received as doubtful, as the doctor in attendance states there never was any nephritis, nor any blood in the urine. There was also sickness and vomiting, especially after food, and a pain shooting from the small of the back round both sides of the trunk.

In December he had an attack of pemphigus, treated by arsenic, and on the 19th January, 1895, he entered an infirmary. He was treated there by Fowler's solution in gradually increasing doses, so that on 27th February a maximum of 22 minims three times a day was reached. The paralytic symptoms, according to the patient and his mother, were fully developed before he was taken home on 3d April. Has always been a nervous child; never had scarlet fever, measles or diphtheria.

Eye movements normal. Pupils react normally to light and accommodation. Patient has full vision. Ophthalmic vessels full, especially the veins, which are also considerably twisted. Patient is hypermetropic.

LUMBAR PUNCTURE OF THE SUBARACHNOID SPACE.

Jacoby (*N. Y. Med. Journ., 1895, lxii, 818; and 1896, lxiii, 6*) summarizes the acquired facts, from his experience and that of others, as follows:

By means of lumbar puncture, cerebro-spinal fluid can be easily removed from the subarachnoid sac of the spinal cord and from the cavities of the brain.

Therapeutically, it is only of direct value as a palliative through the reduction of increased pressure; it may, perhaps, prove of more service indirectly as the first step to local treatment of the cord and brain.

Diagnostically, it possesses great clinical advantages in the diagnosis of the various inflammatory affections of the cerebral membranes and in the recognition of intraventricular hemorrhage as well as of hemorrhage within the spinal canal.

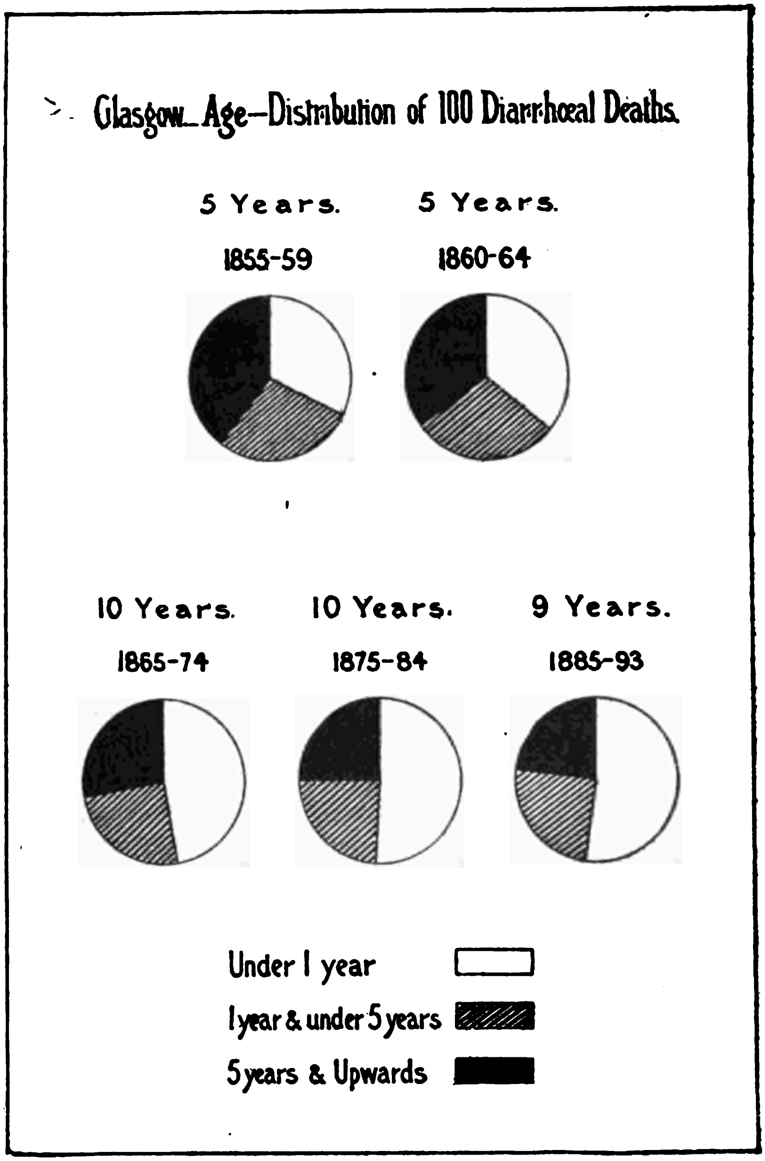
From the facility with which this little operation can be carried out it should not be long before lumbar puncture will form part of the routine work of every practising physician.

ENLARGED SPLEEN.

Proben (*Med. Jour., 1896, lxiii, 23*) showed before the Society of the Alumni of Charity Hospital an infant, aged seventeen months, with a large splenic tumor, producing marked leucocytosis. When two months old it had been in a miserable condition, with sprue, bronchitis and anemia. It had been bottle-fed on condensed milk and farinaceous food. It had been brought for treatment in June, when about a year old, for the anemia and the poor general condition. The nurse said it had always been very pallid, with a cyanotic appearance around the mouth and eyelids at times. Alternately it suffered from indigestion and from bronchitis. There was constipation with fetid movements, which was difficult to manage. At times it suffered from otorrhea, a visible palpitation of the heart and the progressive anemia, which gave it an appearance as if it were suffering from malignant disease. The abdomen was always prominent. Examination, when the child was first presented, revealed the following: Marked pallor of the skin resembling a cachexia; the mucous membranes almost white, the lower incisors (which had appeared at the age of eleven months), the following two incisors and two bicuspids were discolored, as was seen in rachitis. The anterior fontanelle was open, very much depressed and enlarged, measuring about two by three inches. There was the rachitic rosary, and the epiphyses of the long bones were enlarged. The muscular development was poor. There were adenoid vegetations of the nasopharynx, and there was general adenopathy. The heart and lungs appeared normal. The abdomen was strikingly large, protuberant, tense, tympanitic over the right half, and dull, the dullness merging into flatness laterally on the left side. This dullness extended from the eighth rib down into the pelvis. Palpation discerned distinctly a large, hard, movable tumor, sharply defined and notched near the median line. A bruit was heard. The liver was enlarged, projecting two fingers' breadth below the ribs. There was slight lumbodorsal scoliosis. A diagnosis of rachitis with hypertrophy of the spleen and marked leucocytosis was made, and the patient was put under treatment after the blood had been examined and found to contain an excess of leucocytes and to show changes in the red corpuscles. Plasmodia were not found. Iodide of potassium with mercury was administered, but could not be borne by the patient, owing to irritability of the stomach. Inunctions were used for a few weeks without result. Quinine with arsenic was given without result, also iron, etc. Strict diet was enforced. The patient continued to get worse, and was sent to the country for three months, which improved it slightly. After its return it was seen and the tumor again examined. It had increased in size, occupying fully half the abdomen. The cold weather made the infant feel poorly, though its appetite was voracious. There was itching of the abdomen, and pain was experienced when the little one was allowed to stand, probably from a dragging of the tumor. It could not walk. As malarial disease and leucocythemia were excluded, the only etiological factor seemed syphilis, hence a fifth of a grain of mercury with chalk was given three times a day. After about three weeks' treatment there seemed to be a diminution in the size of the tumor, and the treatment was continued. Many would pronounce this a case of leucocythemia, but the blood examination had ruled this out. The only possible factor seemed to be syphillis. Why it had not improved at first it was impossible to say.

INFLUENCE OF SANITARY PROGRESS ON DIARRHEAL DISEASE IN CHILDREN.

This diagram is taken from a review (*Glasg. M. J., 1896, xlv, 64*) of James B. Russell's book, "The Evolution of the Function


Glasgow_Age—Distribution of 100 Diarrhoeal Deaths.
5 Years. 1855-59
5 Years. 1860-64
10 Years. 1865-74
10 Years. 1875-84
9 Years. 1885-93
Under 1 year
1 year & under 5 years
5 years & Upwards

of Public Health Administration as Illustrated by the Sanitary History of Glasgow in the Nineteenth Century."

The diagram shows the influence of sanitary progress on diarrheal disease in children, and the following sentence from Dr. Russell explains it: "The actual state of the matter is that the death-rate under five years is now (1890-94) exactly what it was thirty years ago (1860-64), while the death-rate at five years and upwards is less by more than half." The whole meaning of this is that for young children the only effective sanitary inspector is the mother, and all the sanitary authorities can do is to give her every facility to be clean.

THE USE OF DRY HEAT AND OF HIGH TEMPERATURE IN THE TREATMENT OF JOINT DISEASES.

Dr. W. E. Wirt (*Med. J.*; *1896*, *lxiii*, *20*) read a paper with this title before the Mississippi Valley Medical Association. Shortly after reading a description of this treatment in the medical journals, he said he had encountered a case of rheumatoid arthritis, in which he had resorted to this method. The treatment had been followed by great improvement in the motion of the joint and in the comfort felt by the patient. Dr. Wirt also reported a case of rheumatism of a year's standing, in which there had been more or less fixation. He had broken up the adhesions, made use of the application of heat, and had raised the temperature to 290° F., which had been followed by decided improvement in the ease with which the patient could move the joint and in the relief from pain.

CLUB FOOT.

Ridlon (*Med. J.*, *1896*, *lxiii*, *22*), defined this condition as a distortion of the foot in its relation to the leg. The simple and compound varieties of club foot were dealt with. Nearly all the congenital cases presented the compound variety—equino-varus; a few presented equino-valgus; rarely was there seen a simple calcaneus. Of simple equinus, the author had met with but a a single instance, and of simple varus and simple valgus he had seen none. Of the acquired varieties, simple equinus was by far the most frequently found; next in frequency we found simple valgus; then equino-varus, calcaneo-valgus, equino-valgus, simple varus, and varus in one foot and valgus in the other. The acquired deformity occurred more than three times as often as the congenital form. The etiology of the congenital forms was next dealt with, as well as that of the acquired forms.

PEDIATRICS

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Original Articles.

ON CHILDREN'S SPINES—HEALTHY, UNHEALTHY, AND OTHERWISE.*

By Edmund Owen, F.R.C.S.

Surgeon to St. Mary's Hospital, and Senior Surgeon to the Hospital for Sick Children, Great Ormond Street, London.

AT this, the very beginning of a new year, it does not seem inappropriate that we commence the work of an eminently practical Society by the consideration of a topic closely related to children, and I hope that you will not think that I have done amiss in selecting from this wide and interesting field the subject of Children's Spines—Healthy, Unhealthy and Otherwise.

Healthy Spines.—I confess that I would have liked to make what the purveyors of lighter literature call a "Holiday Number" of this Paper, by avoiding the morbid side of the question altogether, and by dealing entirely with the subject of healthy spines in happy children. I could have found plenty of material for the purpose, for there is nothing more beautiful in the whole range of Nature than the way in which the spinal column is fitted for its important duties. In the healthy child the chief feature of the spine is its suppleness—the great freedom it possesses in all its varied movements. As the child increases in years and in stature the freedom of movement diminishes and the spine becomes endowed with greater strength. The co-existence of freedom of movement and of strength as exemplified in the spinal column excites a feeling of something more than wonder in the mind of the anatomist and surgeon.

The custom which compels the Western nations to cover the back with warm clothing prevents us being as familiar with the movements and the lines of the normal spine as we should be; so that, I think, there may be practitioners who have never particularly interested themselves in the question of what the healthy spine should permit in the way of movement. I think that I may go a step further and say that if one has not a fair working knowledge of the normal spine it may be a little awkward for him to be called upon to give a definite opinion as to whether a particular spine is unhealthy or not—judging from the movements chiefly.

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* A Paper read at the Harveian Society of London, 9th January, 1896.

At the Greenwich Observatory, and at certain other places, there are fixed standards of geometric measurements by which measures in daily work may at all times be compared. But we can have no such fixed standards with which the movements of a spine may be compared and the amount of their variation from the normal precisely estimated. There is just the same difficulty in estimating with accuracy and precision the amount of "+ T" in a glaucomatous eyeball, or of the variation in the range of knee-jerk in central medullary affections. Every practitioner and writer is, therefore, "a law unto himself" in these matters and, as a result, errors and misunderstandings are apt to creep in.

DIAGNOSIS.—That the diagnosis of the early stages of spinal disease—that is of simple ostitis—is often a very difficult matter in actual practice, I am fully aware. On paper it is, of course, easy enough.

It has occasionally happened that, after I have spent considerable time and care in the examination of a child's spine, I have been unable to say definitely if it was in a state of early caries or not. But I have always given the child the benefit of the doubt in such a case. That is to say, I have insisted on his being placed in the horizontal position and have insured perfect rest for the spine until the equivocal symptoms have entirely cleared off or have unhappily manifested themselves. The wrong line to take in such doubtful circumstances would be to say to the parents that, as the signs are so wanting in definition, the child should be allowed to run about as if nothing were the matter. Constantly one hears of instances in which a mother has been told by some friend that her child will be sure to "grow out" of some slight aches or discomforts of early ostitis, or that the trouble is to be considered only as "growing pains." I should very much like to know what "growing pains" are. I have never met with them, and as to a child "growing out of" the pains of early spine disease if only he is allowed to run about, the very mention of it makes one shudder. Aches and pains distributed on both sides of the body, or in both arms or legs, even if they are apparently but very slight, should at once direct attention to the spinal column. They are more than suggestive.

It may possibly be thought that I have laid a little too much stress upon the question of the difficulty of diagnosis of spinal disease in certain cases. I am very glad, therefore, to call on a witness whose opinion will command universal respect—one, moreover, who will not be likely to speak with even the least possible amount of prejudice. Dr. Gowers it is who says: "There is, perhaps, no error in diagnosis which is more frequently made, or which results in graver errors in treatment, than the non-recognition of disease of the spinal bones." After this, I will remark again that, in some cases, it is a most difficult matter to say with certainty (which is not the same thing as speaking with dogmatism) whether there is inflammation about certain vertebral bodies or not.

I think that it is beyond dispute that chronic inflammation of the vertebræ is always of tuberculous origin. The bone tissue is prepared for the cultivation of the tubercle bacilli by heredity or environment. Then the child receives some blow upon, or strain of, the tissue which lowers the vitality of the part and enables the micro-organisms to secure a foothold and a successful cultivation.

Thus the beginning of the disease is a growth of unhealthy granulation tissue in the vertebra beneath the epiphyseal plate. As a rule, this happens in the middle of the front of the vertebra, and the serous or purulent exudation associated with the rarefying ostitis is locked up for a while beneath the anterior common ligament and so gains entrance into the adjacent vertebræ, or is extravasated along the side of the column.

As this growth of granulation tissue proceeds at the expense of the bone tissue in which it is situated, the superimposed weight at last proves too much for the weakened vertebra to support. So a collapse takes place and an alteration occurs in the arrangement of the spinous process.

In the dorsal region a very small amount of collapse of the vertebral bodies gives rise to an unmistakable projection of the spinous processes. But this is not the case when the disease is in the cervical or lumbar region, for there the first effect of the vertebral collapse is the obliteration of the backward-looking concavity which is normally found in the neck and the loin. Thus a straightening and a stiffness in the cervical and lumbar regions are as pathognomonic of disease of the spine as is the angular deformity of caries in the dorsal region.

But though the growth of tuberculous granulation-tissue and the subsequent collapse usually occur fair and square in the middle of the front of the body of the vertebra, this is not always the case. Sometimes (I do not know exactly in what circumstances) the collapse takes place to one side of the middle line, and, as a result, the characteristic stiffening of the back is associated with a lateral deviation of the spine. When tuberculous disease attacks one lateral mass of the atlas, inclination of the head to one side must be expected; but in every other region of the spine a distinct lateral deviation of the column is quite rare as a result of tuberculous ostitis.

To illustrate the normal range of movement, I might have had photographs taken of various healthy children with the spine bent forward, backward, and from side to side, and diagrams made from those photographs. But it might possibly have been thought by some that I had, for this purpose, picked out children with unusually supple backbones, the better to emphasize my point.

I have, therefore, gone to galleries of ancient and modern sculpture and painting and have laid under contribution whatever I thought best suited for my purpose, and from these works I have had diagrams made to which I shall from time to time direct your kind attention.

The first thing to be done in the examination of a child with suspected spinal disease is to have him stripped of every particle of clothing. The only exception which I make to this is in the case of a biggish girl, and for her I allow but a scanty amount. It is impossible to make a thorough examination with the child even partly dressed.

Next, the child must be placed upon a firm, flat surface—upon the hearth-rug, upon the table with a rug or blanket folded on it, or upon a suitable couch. Sometimes when I have been thus examining a child in consultation the doctor has said, "Oh, I did not do it so thoroughly as this." But I would insist that, in some obscure cases, any method less thorough than this may be the means of the surgeon just missing his mark. Moreover, when a child is thus spread out before one, the existence of some defect or deformity, some chronic abscess or some irregularity, may be forcibly thrust upon one's notice which might otherwise have failed to attract attention.

The first figure is that of the naked boy by Flandrin. It is now in the Gallery of the Louvre and is one of the most perfect anatomical drawings that I know. The boy is sitting on a rock in the midst of blue sea and sky. His knees are drawn up and his

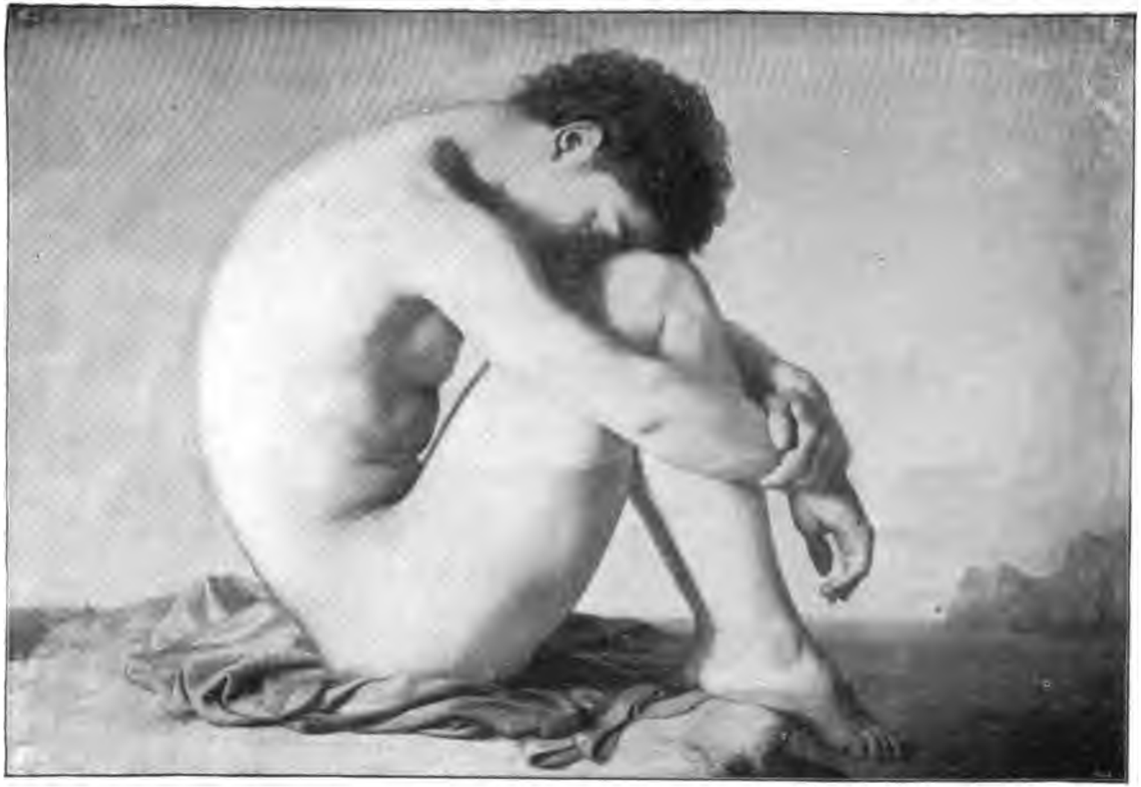

FIG. 1.—Naked Boy, by Flandrin.

head is gently resting upon them, and his hands are crossed in front of his legs. In this position his back, from the sacrum to the occiput, presents the most beautiful curve that it is possible to imagine. Will you kindly notice, amongst other things, how lovingly and how faithfully the artist has represented the spinous process of the seventh cervical vertebra? I have known the natural projection of this process taken as a sign of disease of the spinal column.

Every child with a healthy spinal column can with the greatest ease place himself in the attitude of Flandrin's beautiful boy and, more than this, he can separate his knees and let his head fall down between them.

When I am examining a child for spinal ostitis the first thing that I do is to see if he can assume the attitude of Flandrin's bather. If he has by chance a tuberculous ulceration or even a slight inflammation of the body of any of his vertebrae he cannot do this; for, the bones being tender, the muscles of the back fix the spine very stiffly. It is not that the boy holds his back stiff by a voluntary effort; it is quite beyond his will. After a while, as the inflammation increases, exudation takes place in the tissues near the carious region, and this material, becoming more or less completely organized, adds still further to the amount of the rigidity.

Then comes a crayon sketch of an incidental figure in a large painting by Francesca. It shows a boy bending forward in the most natural way to strip off his shirt as he steps down to bathe. There is such a freedom of action here depicted and such an evenness of curve in the spine, that I thought that I might use it to show how clearly it evinces the fact that the boy has nothing the matter with *his* back. The picture is in our National Gallery.

Here is the photograph of a boy who is at present under my care for dorsal caries. The photograph was kindly taken by Mr. Baldwin at the Children's Hospital. The boy was first placed flat on his back, and then his legs and the lower part of his trunk were slowly and gently raised from the bed, until at last he was resting only upon his scapular region. You will notice that the dorsal lumbar spine has not bent in the least, as it would have done in a healthy child. It remains as stiff as a board from the upper part of the back to the pelvis.

By way of supplement to this diagram permit me to direct attention to a plaster cast of the beautiful line of the back of "Lo Spinario," as the well-known boy is called, who is trying to extract a thorn from the side of his foot. Here again the vertebral column is twisted and bent from head to pelvis, with every vertebra gently

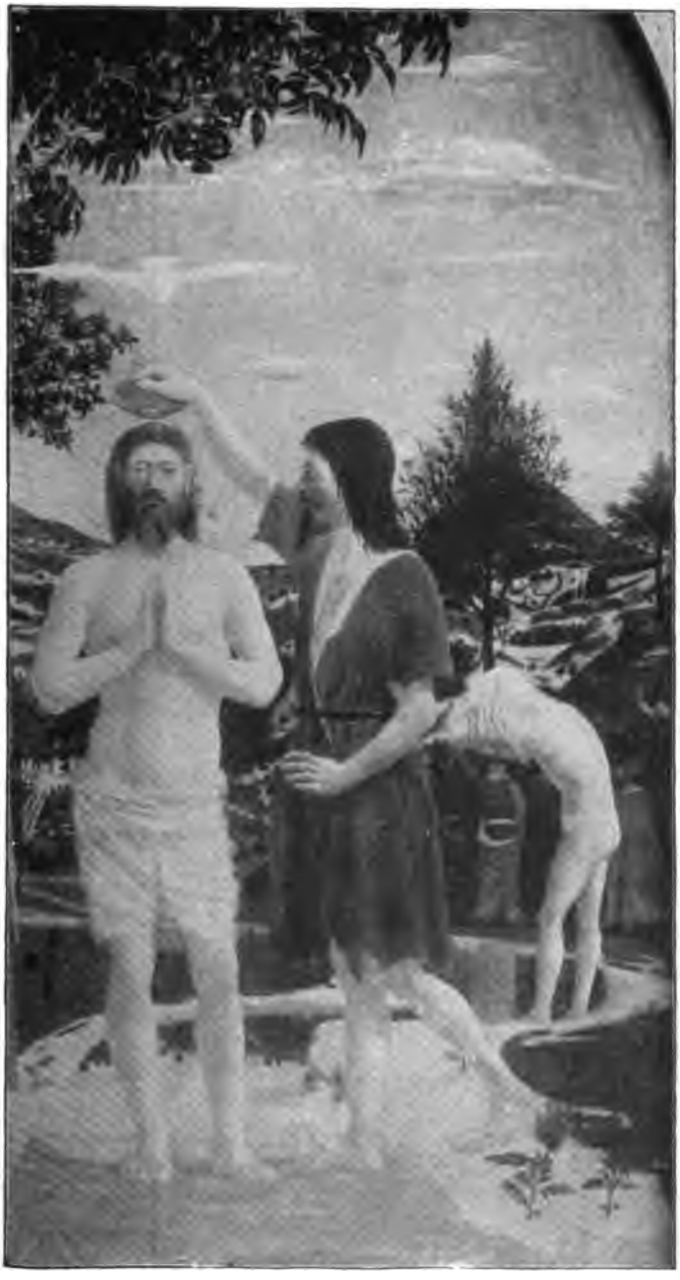

FIG. 2.—Crayon Sketch from Painting by Francesca.

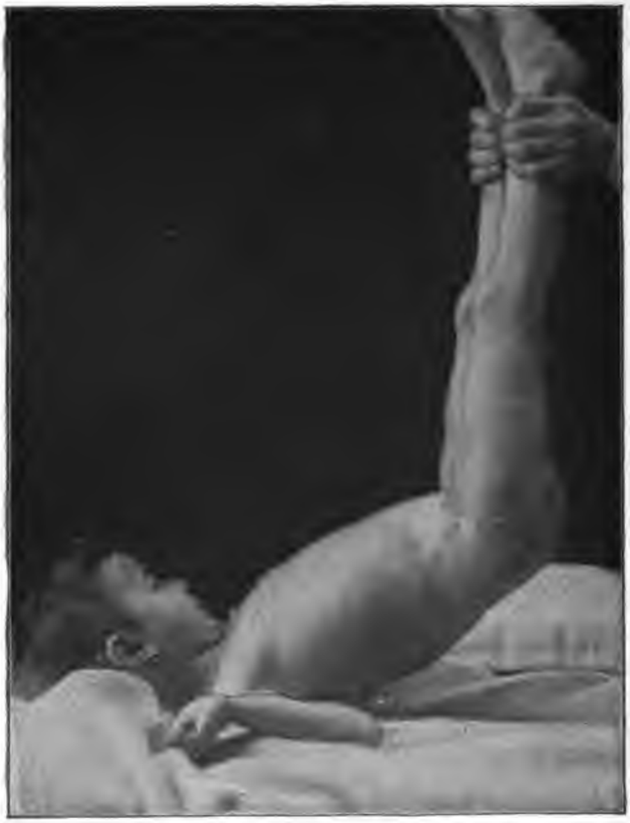

FIG. 3.—Boy with Caries of Dorsal Spine; Back Absolutely Rigid.
(Photograph by G. Baldwin, F. R. C. S.)

pressed and strained. No child with disease of the spine could attempt such a pose. Indeed such an one could scarce look down to his feet, and should he be asked to stoop and touch the ground he could accomplish it only by bending at his knees and hip, keeping his back as stiff and as straight as a board.

Side by side with this beautiful figure let me show a photograph taken by one of our students at St. Mary's Hospital, Mr. Tennison. It is that of a little boy with dorsal caries and a spine rigid throughout. The bodies of some of the dorsal vertebrae had collapsed, and the only way in which the poor child could sit up and see what was going on around him was by planting his elbows upon his extended knees and shoring up his head with the palms of his hands. It is impossible to imagine him in the attitude of Flandrin's "Bather," or of the robust and happy little Roman boy whose greatest trouble in life seems to be that he has trodden on something sharp, for I do not believe that he has a thorn in his foot at all !

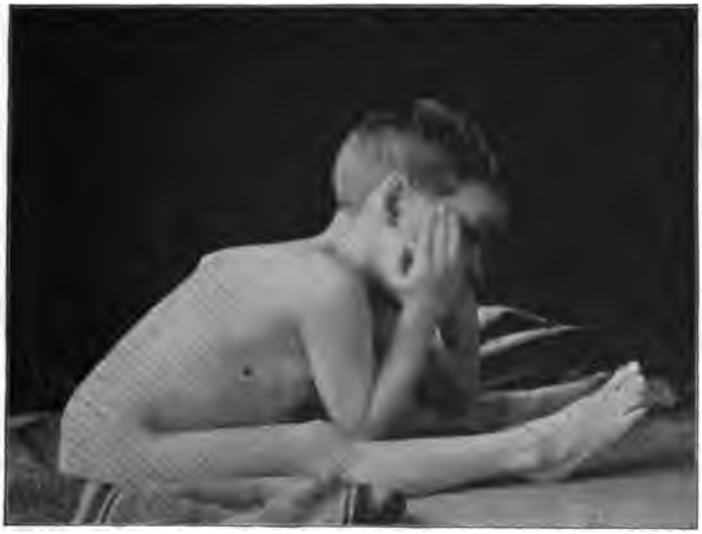

FIG. 4.—Dorsal Caries—Head Shored up by his Hands.
(*Photograph by Mr. Tennison, St. Mary's Hospital.*)

But I hope that it will not be surmised that that depicted was the position which the tuberculous boy was habitually allowed to assume —***maintain***, I might say—whilst he was in the hospital. No, as a matter of fact he was kept lying; but as we knew that if he ever got the chance of sitting up in bed this was his attitude, I got Mr. Tennison kindly to photograph him in it.

And here let me show the portrait of a boy with high dorsal caries, who was under my care in St. Mary's Hospital. His back was not only stiff, but so weak, also, that he could sit up only by planting his palms upon the bed, or the floor, stiffening his elbows, by shoring up his shoulder-girdles.

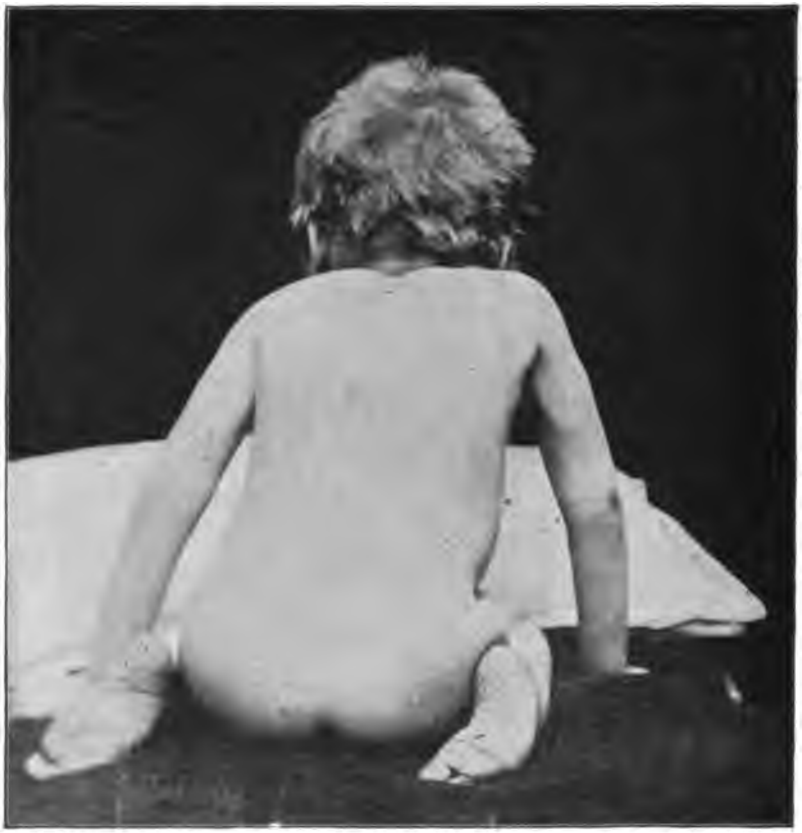

FIG. 5.—"Froggy," a Boy at St. Mary's Hospital with Dorsal Caries. He could sit up only by using his arms.

There are, I know, other methods of examining for spinal ostitis. I will, therefore, mention some of them so that I may have the opportunity of condemning them. The first is that of striking the child upon the soles of the feet as he lies supine; if he winced, the suspicion of spinal caries was confirmed. But he would probably wince if he had disease of his ankle, knee, or hip-joint, or inflammation of the sacro-iliac synchondrosis. I notice that this antiquated method of examination is still in fashion with those who try to arrive at a diagnosis without having the child naked before them.

Then, some persons examine the back in a case of suspected disease by placing a hot sponge in the groove corresponding to the spinous processes, the idea being that if the child flinches, or calls out, his spine is affected. It is a poor method of procedure, and I am prepared to state that if I were to ask any one of you to strip this cold evening, and were then suddenly to dab a hot sponge over your dorso-lumbar region you would start—ostitis or no ostitis.

Equally fallacious is the method of examining by tapping with the knuckle along the middle line of the back. If the tap is severe the child may be frightened and call out when he has no disease, and, on the other hand, there may be no result obtained by the slight jar even when there is a considerable mass of granulation-tissue in the body of the vertebra. As a matter of fact there is but little connection between the tip of the transverse process and the front of the centrum.

But there is a method of examination to which I would most approvingly refer. It is that of applying gently increasing pressure to the top of the head whilst the child is standing or sitting erect. If the child's face is watched no harm or hurt can be done; for, as soon as the pressure begins to cause disturbance in the inflamed segment of the spine, the child frowns or winces. The pressure should not be carried so far, of course, as to make the child cry.

The next figure that I show is that of a boy in a charming family group by Lorenzo Lotto, in our National Gallery. The father is holding some cherries above the boy's head, and, to get a good look at them, the child has to arch his loins into a condition of natural lordosis. Had he any inflammation in the lumbar region or in the lower half of his dorsal region, such an attitude would be impossible. Nor, with caries of the upper dorsal or cervical vertebrae could he have cast his vertical glances upon the tempting fruit. When I have tested the range of flexion in a doubtful spine I always try that of extension, somewhat after the manner of this diagram, though, as a matter of fact, if a child could not arch his spine in that manner, neither could he have bent it.

The last test which I adopt is that designed to see how one vertebra rotates and inclines itself upon another, and this through the whole spine at the same time. Holding the pelvis from behind and fixing it with my two hands, I tell the boy to turn and look at me. It is a very delicate test. The action is well represented in this diagram, which is made from a modern French picture, which shows Aurora freshening up the wings of Cupid, which somehow or other had apparently got a little rumpled during the night. The boy is looking round at them admiringly, arching his loins and disturbing the relative position of every vertebra from occiput to sacrum. The painting represents an amount of grace and freedom of movement of which not one-twentieth part could be forthcoming if the boy had any vertebral inflammation whatever.

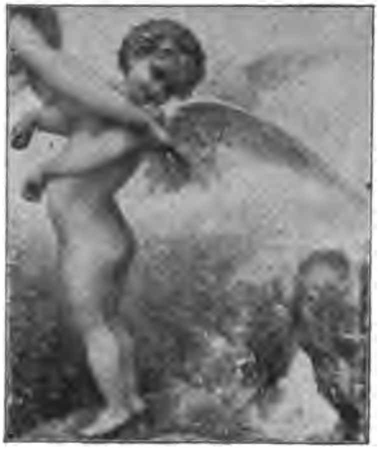

FIG. 6

(*To be Continued.*)

DISEASES OF INTRA-UTERINE LIFE*—ON THE PART OF THE MOTHER.

By EGBERT H. GRANDIN, M. D.,

Consulting Gynecologist to the French Hospital, Etc., New York.

THE portion of this topic assigned to me by your President is that which relates to the effect of disease of the child-bearing woman on the fetus. When requested by him to prepare a paper on this subject, I confess I little realized the obscurity which surrounds it, nor the task of Sisyphus I had undertaken in endeavoring to sift from the mass of theory enveloping it sufficient that is known as fact to justify me in appearing before you at all. My own researches in literature and those which my colleague, Dr. Marx, has undertaken in my behalf teach me that very little of a positive nature is recorded bearing on this all-important subject. I take it that I am not desired to rehearse for you well authenticated facts, but that I am expected, as a scientific man reading to a scientific body, to endeavor to add at least a mite to given knowledge. After summarizing for you the little of a definite nature which I find recorded in regard to disease of the woman as affecting the fetus, I trust, when I venture, as I needs must, to theorize you will bear in mind the fact that it is in no spirit of dogmatism, but because I must theorize if I speak at all.

I shall not waste your time in dwelling on the well-known effect of high maternal temperature on the fetus, nor shall I mention more than thus cursorily the fact that a not infrequent result of such constitutional disturbance is the shedding of the ovum. Neither shall I refer at all to the vexed question as to whether impressions of the mother may be transmitted through the nervous system to the fetus—the so-called doctrine of maternal impressions. One would think that this latter doctrine, whatever the occasional strong proof offered, had long ago been exploded when it was certified that there existed no communication by means of nerve filaments between the woman and the fetus. I take it that I shall best succeed in interesting you, if perchance I do so at all, by dwelling in the first place on the acute and chronic diseases which experimental research and actual experience have proven in some way or another reach the fetus when the woman is affected, and in the second place by theorizing as to how these diseases are transmitted.

It is only in the lifetime of most of us here present that bacteriological research has enabled us to speak at all dogmatically in regard to the transmissibility of disease from the woman to the fetus. This is one of the fruits of the advanced stage where the science of medicine finds itself to-day, and who can predict the wonderful possibilities of research along the same line in the not distant future? Experimentation on gravid animals and sparse clinical observation in the case of woman prove that most of the acute infectious diseases may be transmitted from woman to the fetus. Thus, to specify briefly certain of the individual diseases: Variola can undoubtedly be transmitted. Cases are recorded where the woman has had this disease and the fetus has been born bearing pock-marks; other cases where the woman has been exposed to the disease, has escaped it and yet the fetus has been born with it. Strangely enough, and something almost impossible to understand, of twins, one has been covered with pock-marks and the other not; and, more curious still, immunization of the woman by vaccination has failed to protect the fetus.

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* Read by invitation before the Medical [Society of the State of New York, January 28th, 1896.

Transmission of measles has only exceptionally been noted, but then we must remember that this disease is one which rarely affects adults, since the vast majority have suffered from it in infancy. Yet the researches of Dr. Marx have resulted in six cases being found on record.

Intra-uterine infection by scarlet fever is unquestioned, and the same holds true for erysipelas. In regard to the latter affection, it should be noted that in one recorded case the bacillus was found in the sub-cutaneous tissue of the fetus, and yet not in either the placenta or the cord. Three cases have been recorded where remittent fever affected the fetus, in one the spirilla having been found. In two of the cases, one of which was witnessed by Dr. Marx, the woman had a distinct sensation of violent motion on the part of the fetus as though it were having a rigor, shortly after she had had a chill.

There is but one undoubted case on record of transmission of tuberculosis. This is not unexpected when we remember that markedly tubercular women are not prone to conceive. Septicemia is transmissible, the cases where this has been observed being few, but then, since the development of the science of bacteriology, we have rarely had the opportunity of seeing instances of sepsis developing before labor, even as gradually these cases are becoming more and more infrequent after labor, as the fact is impressed on students that
n avoidable disease where asepsis characterizes obstetric

s in regard to syphilis are too well known to call for comment here. Indeed more is fact in reference to this scourge, and has been such for long, than in regard to the transmissibility of any other disease. So far as concerns our present purpose, sufficient the statement that a syphilitic woman, if she conceive at all, will necessarily infect the fetus; and, further, if she become syphilitic whilst bearing the fetus, the chances are that the latter will become infected.

In short, so far as my researches have carried me, there is but one acute disease which the woman is not able to transmit to her child *in utero*, and this is anthrax. I can find no case on record where this disease has been transmitted, and the positive opinion is justified that such transmissibility has never been verified.

Having established the fact of the transmissibility of disease, we pass to the important question, and the one where theory of necessity steps in, as to how the transference is effected.

Broadly speaking, disease is carried throughout the human body either through the medium of the blood vessels or by the lymphatic system. That is to say, whatever the source of original entrance of the germ, whether by the alimentary canal or the respiratory tract, it is disseminated throughout the body either through the medium of the blood or the lymph stream. Now, in the case of the fetus *in utero*, since so far as we can determine it neither breathes nor eats, infection must reach its system by either blood or lymphatic stream. Recalling for a moment the anatomy of the placenta and the well-established facts in regard to the connection of the maternal system to the fetal, we see that direct transmission of disease from the woman to the fetus by either method is an impossibility, since there is no connection between the blood or lymphatic system of the one and that of the other. The placenta intervenes between the woman and the fetus, and direct interchange of material is precluded by the anatomical relation of placenta to uterus. The fetus, of course, receives its nourishment from the maternal blood, but indirectly, through the interposing medium of the placenta. As far as researches testify, it is probable that interchange of material occurs in the intervillous spaces which constitute the boundary line between maternal decidua and fetal. Here the activity of the blood current is very marked and the conditions which favor interchange are most favorable. Either, then, material, nutrient or toxic, reaches the fetus through the medium of these spaces by simple transfusion, or else by migration of leucocytes. It seems to me that in the light of modern data in reference to the germ-bearing capacity as well as germ-destroying faculty of the leucocytes we most rationally look to them as the carriers of disease from the woman to the fetus. This explanation, further, will be seen best to accord with certain facts which have been established in regard to conditions under which disease is apt to reach the fetus and as to when it is not.

All investigators into the question of the tranference of disease from the woman to the fetus are agreed as to the important rôle played by the placenta and the intervillous spaces. It has been accurately established that a *sine qua non* for the transmission of disease is a diseased state of the placenta. Take, for instance, certain facts established in reference to syphilis. It has been noted that where a woman becomes infected at the time of copulation, syphilitic foci often develop in the maternal portion of the placenta leading to a placental endometritis. Thus, then, a healthy ovum becomes infected because of the similar infection of the placenta. Again, it has been established that where the woman is syphilitic before conception occurs, or else where she becomes infected shortly after conception, where the placenta remains unaffected, the fetus escapes, and *vice versa.* Again, it has been proven that where the woman does not become infected until after the seventh month of gestation the placenta escapes infection and the fetus as well. All these facts go to prove that a healthy placenta offers a barrier to the transference of disease from the woman to the fetus. Similar investigations in regard to the placenta in case of other diseases from which the woman is suffering at the time of conception, or which affect her during gestation, certify to the truth of this assertion in reference to the safeguard against the entrance of disease into the fetus offered by the interposition of a healthy placenta.

The theory, then, which fits known facts, and which we must at the present day accept, is that which credits the leucocytes with transmission of disease from the woman to the fetus. Given an instance where the woman is in health at conception, and for a certain period afterwards, and the chances are that the placenta intervening between woman and fetus is healthy. Now let this woman become diseased and at once the leucocytes in her blood system carry the infection to the intervillous spaces. Here they are met by the barrier against disease established by the healthy placenta. This placenta contains healthy leucocytes with the property of resisting the entrance of diseased germs. The phagocytic action of these healthy leucocytes comes into play, destroys at once the leucocytes bearing disease, and thus the fetus is protected.

Given, on the other hand, a woman diseased at the time of conception, or becoming so shortly afterwards, that is to say, at a period when the placenta is in the course of early formation, then either we have at the outset a diseased placenta or one which becomes diseased as it is forming. Such a placenta contains either no healthy leucocytes or else they have but feeble resisting powers. The barrier interposed by the placenta is, therefore, ineffective to an absolute degree, or else the leucocytes within it resist feebly or strongly, according to the intensity of the disease process endeavoring to gain access from the side of the woman. In this latter event disease is transmitted to the fetus, because the disease-bearing leucocytes from the side of the woman are stronger than and overcome the leucocytes in the placenta.

The question we are considering is possibly not so difficult of solution where the woman is affected by a disease, such as tuberculosis or syphilis, at the time of conception. If this woman conceive at all, it is not improbable that the ovum at the time of insemmination contains the germs of such disease, or, at any rate, in case the ovum should perchance be healthy, then we might consider that the uterine mucosa, where the placenta must engraft itself and develop, is diseased. In such an event the fetus may be said to be diseased from its very start toward life, or in life, since we must look upon the germ of life as present from the very date of insemmination. Such a fetus dies early and is shed early, from the very fact of death due to the disease from which the woman is suffering. The data we possess in regard to early miscarriage prove its great frequency under the condition we are considering. Here disease is transmitted to the fetus from the woman, because of the existence of such disease in the woman prior to conception. The limitations of our, as yet, finite powers of observation and analysis do not allow us to prove this assertion, for who can examine the ovum at a stage when it has but become endowed with life, and who, as yet, is able to do more than theorize in reference to the constitution of the germinal area, whether it can contain the germ of disease and still grow or not? All that we are justified in doing, therefore, is to theorize, and I can but submit that the theory I have stated rests on a basis of probability.

The limitations of theory are about as absolute when we face the question of the transmission to the fetus of disease which the woman has acquired during gestation. In such an event, as we have noted, a *sine qua non* appears to be the presence of a diseased placenta. We must assume then that, in instances where transmission occurs, the soil in which the placenta has developed was diseased before conception, not sufficiently to lead to a placentitis inconsistent with fetal development, but yet of a high enough grade to interpose a very feeble barrier to the leucocytes from the side of the woman bearing the germs of the disease which has attacked her during gestation. When we remember the frequency with which the milder grades of endometritis are met with in women who nevertheless conceive and carry the fetus to term, it is not improbable that the vast majority of women do not possess an ideally healthy placenta; that is to say, that in the average woman the conditions exist at the placental site which enable the transmission of disease from woman to fetus to occur.

Such, Mr. President, are the slender facts tinctured with weighty theory which I am able to offer. I regret that much thought and research have not enabled me to penetrate deeper the gloom which enshrouds this important topic. But, even as we note the growth and the death of the flowering plant without the ability to solve all the elements which enter into the marvel, even so, when endeavoring to elucidate a question dealing with a greater marvel still—the history of life in man before life, such as we know it, begins—can any one wonder that theory prevails and fact has stringent limitations?

Congenital Night Blindness.—An interesting account of this rare but important condition comes from the clinique of Professor Fuchs. One set of cases comprises a grandfather who had two night blind sons and three night blind grandsons. Of these five cases, four suffered from myopia, the correction of which gave good vision ; one is noted as being emmetropic in one eye, and slightly hypermetropic in the other. For the most part the fundi are noted as free from retinitis pigmentosa and the vessels normal. Only in two is the retina observed to be tessellated. In all the cases the minimum light sense, as examined by Förster's photometer is found to be defective. So far as known, there is no history of consanguinity, and in all the condition had remained the same throughout life without any increase.

To these cases there falls to be added that of a Jewess. One of her fraternal uncles gradually became blind. In her the night blindness is reported as having been stationary. Ophthalmoscopic examination showed that the retinal arteries are diminished in size, but the fundus otherwise healthy. In the cases tested the light difference sense is noted as normal. This corresponds with Bjerrum's observation. It should also be mentioned that hemeralopia is often present in glaucoma.—*Glasg. M. J., 1896, xlv, 78.*

CHRONIC INTERSTITIAL NEPHRITIS DURING EARLY LIFE.

By Henry Ashby, M. D., F. R. C. S.,
Manchester, England.

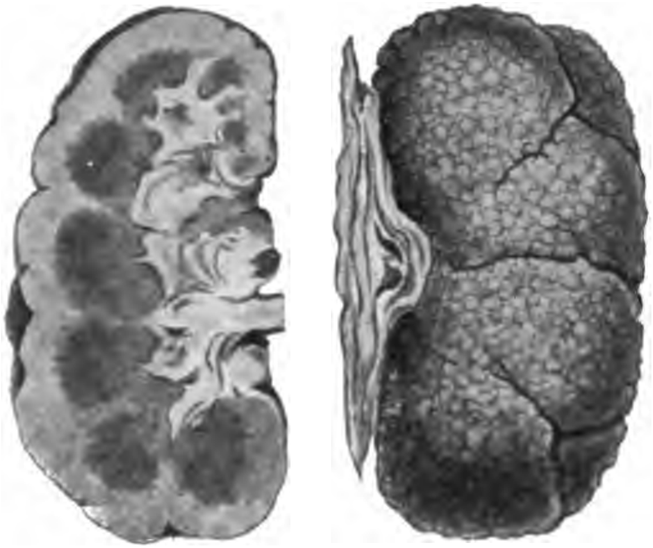
CASES of "Red Granular Kidney" (Chronic Interstitial Nephritis) are not commonly found during the earlier years of life. This form of kidney disease belongs rather to middle and advanced life, when various degenerative changes are apt to take place in the tissues as the result of gout, alcoholism, or some other causes. Cirrhosis of the liver and granular kidneys are occasionally found in children who are near to puberty, without any definite cause being discovered, while it is usually possible to exclude gout and alcoholism.

I have met with only three cases of contracted granular kidneys among children, which were verified post mortem, though in several others I have suspected their presence during life. Two of the fatal cases were in girls ("Ashby and Wright's Diseases of Children," 3d ed., p. 560) aged 10½ and 11½ years, and one in a boy (see case below) aged 12 years. In the first case the kidneys together weighed 1½ oz., in the second case 3 oz. (R 2¼ oz., L ¾ oz.), and in the third 2½ oz. In appearance these kidneys closely resembled one another, being small, tough, reddish in color on section, the cortex more or less wasted. The capsules peeled off with difficulty, leaving a typical granular surface. On microscopical examination, large tracts of fibrous tissue were visible; there was an infiltration of leucocytes between the tubules, and many atrophied glomeruli, surrounded by fibroid tissue, were seen. Some of the tubules were dilated, as the result of pressure or blockage.

In all the cases there was increase in the weight of the heart, namely, 8 oz., 8¾ oz., 8 oz., respectively; the walls of the left ventricle were hypertrophied, with no marked dilatation of the cavity, and in one the mitral valves were thickened from an old attack of endocarditis.

All three cases came under notice for the first time a few days before the fatal issue. In one the history was very imperfect. In two of the cases there was a history of severe frontal headache, thirst, and frequent passage of urine for some months or more before coming under observation. In one case there was a history of fits for two or three months before admission. In one there was edema during the last two or three weeks of life, in the other two there was no edema from first to last. In one case no urine was obtainable; in two the urine during the time they were under observation varied from S. G. 1,010-1,015, the albumin amounting to about one-half the volume on boiling.

With regard to causation, the only fact of interest elicited was that, in one case, the father, who was dead, had been a confirmed dipsomaniac, but the girl herself had not taken alcohol. In connection with this it is interesting to note that in one of my cases of cirrhosis of the liver, occurring in a girl of 12 years, the mother was a confirmed drunkard, though the girl had never taken alcohol.

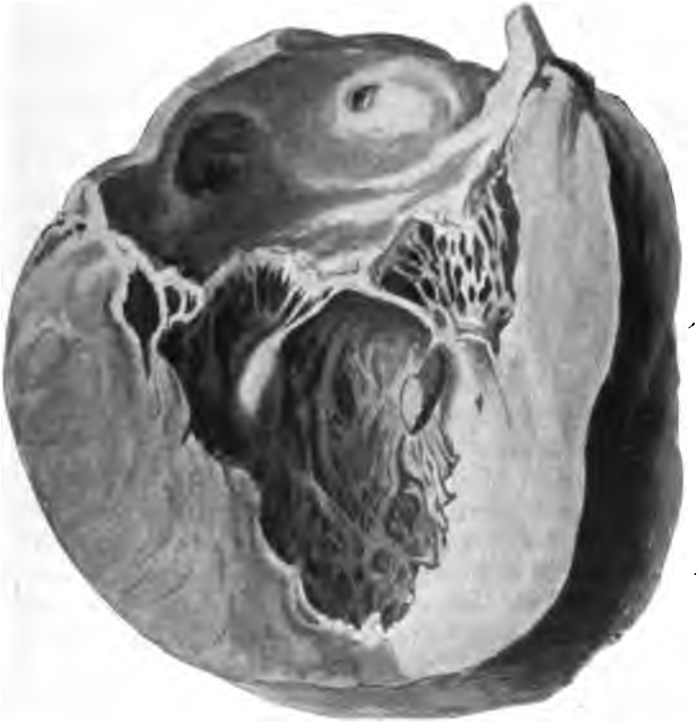


Contracted kidney from a boy of 12 years, cut section and granular surface shown—exact size.

(W. E. FOTHERGILL, del. ad nat.)

In one of the cases the patient was suffering from late rickets, and indeed had been admitted to hospital for an operation for genu valgum. In a somewhat similar case of late rickets I found albumin in large quantities in the urine; the boy suffered also from thirst, and there was frequency of micturition. He probably had granular kidneys.

Arthur G., aet. 12 years.—His friends state that he has suffered from a discharge from the left ear, ever since an attack of measles when three years old. It is uncertain if he has had scarlet fever. He had chorea several years ago. For the last three months he has "always been eating and drinking," has been dull and unlike himself, and has suffered a good deal from severe frontal headaches. A month ago he had a fit, followed by several others the next day. The mouth was drawn during the fits, and the left side was especially affected. Three days ago he had another series of fits.



Heart from boy of 12 years with contracted kidney, showing hypertrophied wall of left ventricle—exact size.

(W. E. FOTHERGILL, del. ad nat.)

Admitted Oct. 14, '95. It was noted that he was a badly nourished, well-developed boy. There was a purulent discharge from his left ear and almost complete deafness. There was no paralysis, but it was thought that the grasp of the left hand was a little stronger than that of the right. There was a faint but well-marked systolic bruit at the apex of the heart, with some hypertrophy of the left ventricle and a heaving impulse. Pulse not easily compressible, 132 to the minute. Has passed plenty of urine of a light color, S. G. 1,010, containing much albumin. No optic neuritis or retinal changes.

Oct. 23. Has had six or eight fits to-day, during which he became unconscious, with eyes turned to the right, tonic spasm of the limbs, head retracted, and muscular twitchings of the face. He remained for some time afterward stupid and dull. His headache has been very severe.

Oct. 24. Has vomited several times to-day, has been unable to sleep on account of headache and has appeared to wander at times. His breath has an ammoniacal smell.

Oct. 27. No fits, no vomiting, but he is delirious, shouting and talking constantly; he appears to recognize those about him, but behaves more or less like one under the influence of alcohol. Albumin the same. A good deal of diarrhea.

Oct. 28. Death, preceded by unconsciousness for 24 hours. There never was any edema.

P. M. No edema anywhere. Lungs and pleura are normal. Heart weighs 8 oz.; the wall of the left ventricle is hypertrophied (see fig.), but there is no marked dilatation of any of the cavities. Edge of the mitral valves much thickened; heart muscle pale. Liver and spleen normal. Kidneys weigh 1¼ oz. each; capsules strip with difficulty, leaving a granular surface (see fig.). On section the cortex is seen to be somewhat narrow. A microscopical examination of the kidneys shows tracts of fibrous tissue containing compressed and degenerated glomeruli and tubules. The tubules everywhere appear dilated, with their epithelium flattened, presumably as a result of their having been overdistended with urine, in consequence of obstruction lower down in their course. The glomeruli in places were degenerated and surrounded by fibrous tissue. The appearances suggested a cirrhosis of the kidney, due to a chronic interstitial inflammation.

Practical Notes.

An Antidote for Poison Ivy.—An anonymous correspondent of the New York *Sun* writes that an antidote for ivy poison is the plant called by some people "ceroline," by others the "silver plant." It grows by the side of brooks, to a height of about two feet; the stalks are green and bear a yellow blossom with a red tinge, shaped like the lady's slipper. The test of the plant is to place a leaf under water, when it assumes a silvery look. The stalks can be crushed and the juice rubbed upon the poisoned surface, when immediate relief will follow; or a tea can be made from it with which to bathe the surface. The correspondent claims that he has used this for years in a family particularly sensitive to this poison, and has given it to many cases, and it never fails.

The plant referred to is the *Impatiens fulva*, a species most common in wet grounds in the South. It has small, orange, spotted flowers, and is best known under such names as "touch-me-not," "jewel weed," "balsam," or "silver leaf." The name of the genus is derived from the sudden bursting of the seed-pods when touched or slightly pressed with the hands. As the pods ripen they burst, scattering the seeds to a considerable distance. Our common garden balsam, *I. balsamini*, is a closely related species, and its seed-pods are equally sensitive to the touch.—*Bull. Pharm., 1895, ix, 564.*

Diarrhea Cordial.—Spirit of camphor, 4 drams; compound fl. ext. blackberry, 1 ounce; compound tincture of cardamon, 1 ounce; chloroform, 2 drams; tincture capsicum, 2 drams; oil of peppermint, 1 dram; fl. ext. of catechu, 4 drams; sugar, 24 ounces; alcohol, 5 ounces; water, 13 ounces. Mix alcohol with 13 ounces of water; add camphor, fluid extracts, oils, etc., and filter; then dissolve sugar by cold percolation; add chloroform and shake thoroughly; then add sufficient simple syrup to make 32 ounces.—*Am. Druggist, 1895, xxvii, 319.*

Germs in Condensed Milk.—Dr. Sargent says the general supposition that condensed milk is sterilized milk is by no means correct. There is certainly great difference in the products of different manufacturers. Condensed milk often contains microbes, which, if not actively growing in the milk, are ready to grow when the milk is diluted and taken into the stomach. When the condensed milk is slimy, cheesy or semi-solid in character, it contains germs which are actively developing. These germs are from the sources which ordinarily contribute to the contamination of milk. The only safe way in the use of condensed milk is to sterilize it, by the same methods employed for sterilizing fresh milk. As a rule, condensed milk requires sterilization as well as ordinary milk, although it must be said that generally there are fewer microbes to be found in condensed milk than in fresh milk as furnished by the milkmen.—*Pop. Sc. News, 1896, xxx, 46.*

Transmission of Tubercle Bacilli.—Drs. Baraud and Rénon reported to the Société de Biologie of Paris, in June, 1895, that they had investigated the question of the direct transmissibility of the tubercle bacillus of Koch, through the placenta, to the human fetus. In five cases they took a quantity of blood from the umbilical vein and injected it under the skin of the abdomens of guinea pigs, immediately after the birth of the child. In three of these cases the guinea pigs did not become tuberculous, while in two they did. In the first case the mother was in the third stage of phthisis, the sputa containing bacilli. There were no lesions of the placenta present, apparently. The guinea pig which was injected developed a chancrous ulcer at the point of inoculation, and died with tuberculosis of the liver and spleen at the end of two months. The bacilli were found in the spleen, pulp and in the caseous masses of the chancrous ulcer. An autopsy performed on the still-born infant gave negative results. Three guinea pigs were injected with the juice of the pulp of the lung and liver and peritoneal serum, and two of them died. In the second case, the mother had pulmonary cavities, but no examination of the sputa was made. The child died of broncho-pneumonia on the fortieth day. The placenta presented a normal appearance. At the moment of birth, blood from the umbilical vein was injected into two guinea pigs; one pig died of generalized tuberculosis, the other lived.—*Med. Rec., 1896, xlix, 150.*

Trichloracetic Acid in Purulent Inflammation of the Middle Ear.—Dr. Okuneff is convinced that with this remedy one may always obtain a complete cure of chronic otorrhea with a re-establishment of hearing. The suppuration may be quickly arrested, the offensive odor removed, and the regenerative power of the membrana tympani awakened to repair the perforation and re-establish normal audition.—*Revue de Laryngologie,* — *Med. Rec., 1896, xlix, 158.*

Artificial Feeding of Infants.—There are one or two points which we could never become clear upon in connection with the artificial feeding of infants as advocated by recent writers. They will tell you that all prepared foods are useless and probably injurious. They declare that there is but one substitute for the mother's milk, namely, cow's milk. They then proceed to give minute directions how this milk must be prepared for use. For the newly-born infant you must give but one part milk with three parts water. Later this is increased to one-third milk; then one-half; and by the time the infant is about ready to give up a liquid diet consent is given to use all milk. Now, if cow's milk be such a superior substitute for mother's milk, why should it be subjected to these changes in strength? Reliable authorities declare that there is practically no change in the composition of the mother's milk. If it were true that the mother's milk was first extremely weak and then gradually became stronger, there would be some reason in having its substitute thus changed. That it is necessary to dilute cow's milk and then add certain ingredients, in order that it may more nearly resemble mother's milk, we do not dispute. But having once made these changes, why should they be changed again? It has always appeared to us that these continued changes, according to the age of the infant, were neither founded on theory nor common sense.—*Pract. Med., 1895, vi, 205.*

Antitoxin as a Means for Diagnosis.—Herrmann reports a case in which there was a question of diagnosis between a foreign body in the larynx and a diphtheria. The dyspnea grew less after an injection of antitoxin, and the child made a rapid recovery. If it had not been for the administration of the antitoxin, a tracheotomy would have been performed.—*Med. Rec. 1896, xlix, 88.*

Papain for Tape Worm.—Bartholow recommends papain as a tape-worm remover. Ten grains are taken three times a day after meals.—*New Remedies, 1896, viii, 29.*

Ringworm.—Common *salt*, applied in a solution to scalp for five nights successively, washing off next morning with 10 per cent *boric-acid* soap. Cure in one month in three cases.—F. J. Reilly, *British Medical Journal,—Univ. M. J., 1896, x. 29.*

Editorials.

DIPHTHERIA ANTITOXIN.

FROM time to time apparent remedies for diphtheria have appeared. They have often been highly recommended; but, as a rule, they have been short lived and soon discarded. That such remedies should meet with favor is not altogether surprising, when the close resemblance of the anatomical lesions of catarrhal angina in those of diphtheritic angina is considered. It is very difficult to distinguish one from the other, and hence many remedies have received the creditof curing diphtheria when in fact this disease was not present. Of late the bacteriological test seems to have superseded the clinical evidences as a diagnostic feature, but this has not brought light out of darkness; for the postulated organism may appear in throats of healthy children who never suffer from its presence, so that at the present time a diagnosis of diphtheria cannot be made at a glance, on account of the similarity of the anatomical lesions and clinical aspect to catarrhal angina during the first 24–36 hours of its presence.

Not a few have had the experience of being called to see children suffering with an inflammation of the fauces, whose anatomical and clinical features prompted the bacteriological examination for diphtheria, which showed the presence of the Klebs-Loeffler bacillus, while subsequent developments, proved that the patient had been suffering with catarrhal angina instead of diphtheria.

With the difficulties in the way of a diagnosis of this malady a vast experience will be required before the efficacy of a remedy can be judged. This is particularly true of any substance such as diphtheria antitoxin, whose physiological effect is so little known.

Judging from the experiments of Behring and others, this remedy merits careful consideration; yet, knowing the result of transfusion of heterogeneous serum as developed from the experiments of Landois, Ponfick and others, it is rather improbable that this remedy may be used without great care and discretion.

Unquestionably antitoxin is a modified serum, but this modification is not sufficient to destroy its sinister effect on the circulation and kidneys, as is indicated by the experiments of Vissman and Chapin.

The results of those experiments are not sufficient to cause great alarm in most healthy children, nevertheless Alfoeldi reports a case of death, after the administration of an immunizing dose of serum. In this case it was not proven that there were other causes for the disastrous result. An extremely important omission. Huebner reports that as the dose administered was increased the per cent of post-diphtheritic paralyses increased in a greater ratio than the dose. This, however, may be an insignificant drawback, provided the mortality of the disease be so much diminished as statistics apparently indicate.

Behring's experiments show that diphtheria antitoxin has an antidotal effect on toxins of the Klebs-Loeffler bacillus, but its value in the treatment of the disease is problematic; for when he introduced toxin and antitoxin at the same time the animals suffered no ill effect; the same result took place when toxin was administered twelve hours after antitoxin; but when antitoxin was administered twelve hours later than the toxin, recovery was not the rule.

This last experiment resembles the condition which confronts the physician. Parents as a rule do not consult him before the child begins to show the effects of some disease. Again, at times, the little patients have been treated by eminently capable physicians (Henoch) for other troubles, and diphtheria was never suspected until paralyses appeared. These errors are fortunately infrequent; but they indicate, as stated above, that a positive diagnosis is not always an easy matter and very often requires more than twelve hours' observation.

The experiments of these authors show that the longer the time between infection and administration of serum the less the probabilities of recovery. In fact, according to Behring it is useless after three days have passed.

If this remedy has lessened the mortality of diphtheria it is probably due to increased watchfulness of parents, prompting them to consult a physician earlier than formerly, thus beginning the treatment very soon after infection. There may be other causes; for example, the temporary leucocytosis which serum produces, as shown by Lœwy and Richter. At all events, the present status of antitoxin does not justify abandoning all other remedies for serum-therapy. WILLIAM VISSMAN, M. D., New York.

Rupture of Left Lateral Ventricle.—Under this title Dr. B. Merril Ricketts, in *Medicine* (July, 1895), reports rather an exceptional case. The patient was a boy, twelve years of age, who had had fair health up to this illness. His symptoms, when Dr. Ricketts saw him on the fourteenth day, were: Normal temperature; right pupil widely dilated and giving no response to light; pulse 120 to 150. The patient was very sluggish and unable to swallow. No paralysis of sensation or motion in any group of muscles. No drawing of the face to one side. There was no history of injury or ear trouble. On post-mortem there was no indication of perforation of any of the basilar bones. On removing the dura, however, a rupture of the brain substance on the under surface of the spheno-temporal lobe was noticed. The laceration extended into the left lateral ventricle, which was found to contain about two ounces of bloody serum. Both gray and white matter around the perforation was very soft. The dura was intact and there was no trace of inflammatory action. Dr. Ricketts thinks that this was a case of effusion in the ventricle, which caused a rupture of its lower wall into the spheno-temporal lobe. Dr. Ricketts also reports three cases in which he operated on the brain for epilepsy, in all of which there was some slight improvement in the condition of the patient.—*Med. Rec., 1896, xlix, 157.*

No Verdict in the Brooklyn Vaccination Case.—The jury in the case of Peter Eurggref against Health Commissioner Emery and Dr. Frank E. Boyden, for $5,000 damages for the death of his nine-year old daughter, which was on trial several days in the Supreme Court, in Brooklyn, has disagreed. The plaintiff alleged that his danghter's death resulted from the compulsory vaccination, which was one of the incidents of the small-pox scarr in the spring of 1894.

Society Report.

LOUISVILLE CLINICAL SOCIETY.

ENLARGED BRONCHIAL GLANDS.*

PHILIP F. BARBOUR, in a paper read before the Louisville Clinical Society, said: Enlarged bronchial glands occur more frequently than text-books lead us to infer. They are productive of great trouble as a starting point for tuberculosis; in fact many writers speak of the condition only as "Bronchial Phthisis." The difficulty of recognizing this enlargement is, perhaps, the reason why they are not ascribed the importance which they merit.

However difficult the diagnosis may be in the adult, all concede that it is more difficult in the child. The study of pediatrics has added much to our knowledge, and has trained our observation so that many of the diseases of children can be easily diagnosed.

The bronchial glands are lymphatic glands lying about the bifurcation of the trachea and following the course of the large bronchi. The lymphatic ducts of the lungs begin from minute openings or stomata between the flattened transparent epithelial cells lining the alveoli, and empty into the lymph lacunae in the alveolar walls. During inspiration the alveoli are dilated and the stomata in this way enlarged. The areostatic pressure tends to drive all foreign matter in the alveolus into these openings. Both the superficial and the deep lymphatics unite in carrying their lymph to the bronchial glands. That the glands pick up foreign matter is proven by change in color from pink in childhood to deep black in old age. Autopsies have demonstrated that they also pick up bacteria.

An enlarged bronchial gland, the seat of an inflammatory hypertrophy and hyperplasia, is not in condition to perform its work at the gate-way of the lung; it interferes with the return flow of lymph from the lungs, which 'may be followed by lobular or interlobular formation of new tissue; the secondary pressure may cause congestions and exudation in the air vessels. The normal resistance of an inflamed gland is much diminished. If tubercle bacilli find entrance into a lymph node they may be destroyed by phagocytic action of the gland; but if a lymph node, disabled from any cause, is attacked

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*This original paper and a part of the discussion appeared in *The American Therapist* New York, and it is with the knowledge and consent of the Manager of that publication that an abstract is prepared.

by tubercle germs it offers ineffectual resistance and passes into a caseous or tuberculous condition.

Tubercular infection of these glands accounts for the occurrence of tuberculosis in many children. The frequency with which tuberculosis in children starts in the lymphatic system, and becomes generalized, is in proportion to the frequency with which it is localized in adults. It is rare to find tuberculosis of the apex of the lung in the child.

Scrofulous or strumous diathesis is a predisposing cause of enlarged glands, but they are frequently found where there are no evidence of scrofula. They occur after acute bronchitis, pneumonia, etc. The most frequent causes of enlarged bronchial glands are measles and whooping cough. It is probable the majority of children soon recover from these attacks, but not a few suffer afterward from a peculiar spasmodic cough, almost identical with the cough of pertussis, except that there is no whoop and it is not followed by vomiting. Sometimes there is a turgescence of the face from an impeded venous circulation, or phonation may be affected. Physical examination of the lungs under such circumstances is exceedingly difficult in the child. Granting that an enlarged gland is the cause of the trouble, percussion may or may not reveal it. Usually the glands are placed too deep to give dullness, especially as they are small. Occasionally, however, dullness may be gotten anteriorly on either side of the manubrium, for the depth of the child's chest at this point is very little, and a gland on the anterior surface of the bronchus is nearer the front than the back of the chest. It is the anterior projection of the enlarged gland that interferes with the venous return from the upper extremity. If dullness is made out, care must be exercised to determine that it is not due to atelectasis, which occurs so frequently and so easily in children.

Bifurcation of the trachea is higher in the child than the adult, and lies on a level with the third dorsal vertebra or interspace. The right bronchus is more superficial than the left and may easily be auscultated if the stethoscope is placed just internally to the root of the spine of the right scapula. In most cases, by listening over the bronchus, you will obtain a sonorous or large mucous rale. Frequently the sound is conveyed over the whole chest, but the point of maximum intensity can be traced to the location of these glands. That these glands exert sufficient pressure upon the bronchus to set up inflammatory processes there has been demonstrated by post-mortem findings. A gland which had undergone caseation and ulceration has often been eliminated through the bronchus.

Compression may be sufficient to interfere markedly with the entrance of air on that side, lessening the normal breath sounds, or even doing away with them entirely. Of the numerous sources of compression that may occur in the adult thorax only a few are met with in the child. Cancer of the posterior mediastinum, pleura or lung, aneurisms of the arch of the aorta and mediastinal abscesses, while rare in the adult, are practically never found in the child. Exostoses from the sternum, clavicle or vertebra are infrequent, and vertebral caries would be easily recognized if sufficient to cause any bronchial pressure. Pericardial swelling should be excluded without trouble, though the normal outlines of the child's heart are not so definitely made out as in the adult. This leaves hypertrophy of the lymphatic glands as practically the only pathological condition to exert compression. The lumen of the bronchus may be lessened by constrictions and inflammatory thickenings. Strictures, unless congenital, are mainly syphilitic. Inflammatory thickening of the bronchus would produce sonorous rales, or localized inflammation would account for mucous rales, but unless produced by external compression and irritation they are pathological curiosities. It is not the nature of bronchitic inflammation to remain in one spot unless there is some localized irritant, and that brings us to the point that an enlarged gland is the only source of irritation at all likely to be found in this situation. If the condition is recognized early, before the gland has become tuberculous, it may be relieved by appropriate medication. Cod liver oil and iodine are two of the most reliable agents that we possess for the treatment of this condition. Iodine may be given in syrup of the iodine of iron, or in potassium iodide. Ammonium chloride combined with potassium iodide is also useful in the treatment of enlarged glands.

DISCUSSION.

Dr. J. B. Marvin: There is always difficulty in making a diagnosis of enlarged bronchial glands, especially in the child, until symptoms become very marked. I always feel doubtful of my ability to map out by percussion the limited area of dullness, especially if that area is near the manubrium sterni. It is well in these cases to practice auscultation, as this gives us more rational indications. Pressure of enlarged bronchial glands often gives rise to a cough, which, in the absence of other symptoms, should cause us to suspect the nature of the trouble. The so-called scrofulous or strumous conditions of the glands, described by some authors as tuberculosis of the lymphatic glands, in many cases are amenable to treatment. We have all seen cases in children, the so-called tabes mesentericus, where there have been glandular enlargements about the belly, neck, etc., that under iodide of iron, cod liver oil, proper diet and hygiene have cleared up and the patients have lived for years.

I have several children in a family now under my care, the mother dying of phthisis. The oldest child has nasal adenoid growths, is a mouth breather, but otherwise robust and healthy. The next, a little boy, has a number of enlarged glands about the neck which have softened and I have had to curette them. The third, a little girl, recently began to run down in health and has enlarged bronchial glands which can be easily detected.

My experience has been that we most frequently find enlarged bronchial glands in children who have adenoid growths about the nose or posterior pharynx, or enlarged glands about the neck, or in the groin. Is it not also a fact that these glands may become enlarged, following any source of irritation, acute or chronic, and then constitute a fertile soil for development of the tubercle bacillus, and from there spread infection to the throat and lungs? On the other hand, is it not also equally true that the bronchial glands may act as sponges and filter, and keep out the tubercle bacillus for quite a period of time? I have seen the tubercle in these glands when it could be found nowhere else.

DR. J. W. IRWIN: The paper covers the field very well so far as it goes, but it is defective in that no diagnostic point is mentioned by which we can ascertain that the bronchial glands are diseased. The location of these glands makes it almost impossible to determine by auscultation or percussion whether they are enlarged or not. Some writers have asserted that whooping cough was due to disease of these glands, and stated that when the patient was lying on his back he would have, as a result of these enlarged glands, a cough very much like that of croup, which was an early diagnostic symptom of whooping cough.

DR. J. A. LARRABEE: I am impressed with the importance of Dr. Barbour's clinical experience, which shows that this condition is more prevalent than was previously believed. It has been many years since that able clinician, Dr. West, first demonstrated the importance of diseased bronchial glands. He spent a great portion of his time studying this subject, not only at the bedside but in post-mortem room. He demonstrated that enlarged bronchial glands in the child are of frequent occurrence; and that it is the result of an hyperplastic deposit. This idea has met with almost universal acceptance, and agrees with our ideas of the pathological condition.

The statement of Eustace Smith that enlargement of the bronchial glands should precede pertussis is quite remarkable, inasmuch as their growth is dependent upon the blood supply. It may be true that during the course of an attack of whooping cough, in cases of great severity, these glands may become enlarged. But it would be impossible, according to our idea of the pathology of enlarged bronchial glands, to accept the theory that the cough may be explained by enlarged glands, or that the enlargement is simply a consequence of the cough.

It has been my belief that all those cases of long-continued pertussis, after contagiousness has ceased, and a persistent cough continues, are dependent upon enlarged bronchial glands, and a careful auscultation and percussion has been able to demonstrate a dullness high up between the scapulæ. I have been able to demonstrate pressure upon the bronchi, and believe that where there is a ronchus, and a lessening of the lumen of the bronchi, we are warranted in saying that an enlargement or thickening of the bronchial glands is the cause. As Dr. Barbour has very properly said, there is no other cause for this condition, with the exception of a thickening due to specific disease, which is extremely rare.

There is also a laryngeal cough with which little children often suffer—almost invariably after whooping cough. The character of the cough is very peculiar, and in not a single instance have I failed to bring out the fact that it began after an attack of pertussis. In these cases I believe the recurrent laryngeal nerve plays a part. Irritation of this nerve would bring about a cough which might continue for a varied length of time. In all these instances I believe irritation produced by enlarged bronchial glands is the real condition.

In the treatment of enlarged bronchial glands, the most important thing is to build up the system; pure air, proper exercise and tonics. In the management of these cases there is another point that should be emphasized, *i. e.*, counter-irritation. It is of considerable value.

As regards tuberculosis infecting the lungs through these enlarged glands, this agrees with what we know of the tubercle. We all believe, I suppose, that we must not only have the seed, but we must have suitable soil. These glands, if not primarily infected, may become the seat of tuberculous deposit, and may engraft the tubercle bacillus upon the entire system unless the resistance of the leucocytes is sufficient to prevent it. These glands undergo a caseous degeneration, producing evidences of tuberculosis—minus the bacillus, of course. Suppuration of these glands is common; they may undergo absorption in many instances, and repair takes place, the gland itself being destroyed. In such cases you have a dilatation instead of a narrowing of the lumen of the bronchi. These glands not infrequently discharge by suppuration into the bronchial tract; their walls are applied to the walls of the bronchi, and the latter become infected by tubercle bacilli which obtain entrance through these enlarged glands.

Children do not develop tuberculosis of the lung with any degree of certainty, when the disease may be present in other parts of the body; while it is a well-known fact that if the adult has tuberculosis affecting any part of the system, the post-mortem will almost invariably reveal some disease of the lung. A child may have tuberculosis of the brain or other part of the body and still show no tuberculous deposit in the lung; and this is a peculiarity of childhood. I believe the dissemination of tubercle follows the line of most active development and growth, *i. e.*, those organs which are receiving the more rapid and constant supply of blood for nourishment and for growth, are most likely to be affected. This is a fact that must not be lost sight of in making a distinction between the disease in an infant and an adult. Again, the tubercle pursues a route that is determined by the activity of the circulation. Many of the glandular structures cease almost entirely to exist by growth, but the glandular system of the child is exceedingly active. An example of this is the disappearance of the thymus gland at puberty.

DR. J. B. MARVIN: What has been your experience with cases of whooping cough--prolonged cases—recurring every winter; do you not find the class of children that have this character of cough, and those cases in which you have bronchial enlargements, are children who are mouth breathers, or have glandular enlargements somewhere else about the body?

DR. J. A. LARRABEE: Most undoubtedly; I believe that children who are mouth breathers and have adenoid growths are the ones who are most often the subjects of enlarged bronchial glands, who suffer from the secondary cough following pertussis, and who have glandular growths about other parts of the body.

DR. F. C. WILSON: Very little is said in the text-books concerning enlargement of the bronchial glands; the literature of the subject is meager; and in the work I have been doing at my clinic in the Hospital College of Medicine, I have been rather surprised at the large number of cases met with. For several years I have been calling the attention of my classes to the existence of enlarged bronchial glands and the frequency with which they may be detected. The difficulties of diagnosis are not so great as indicated in the discussion this evening. Examination being made by auscultation and percussion, dullness can usually be distinctly made out. In some cases the increased area of dullness that can be detected is quite limited, and may best be made out posteriorly between the scapulae at about the second or third dorsal vertebra. And my observation has been that it is most frequently found on the right side. I suppose in eight out of ten cases that have come under my observation, the enlargement of the bronchial glands has been in the right bronchus. I can offer no reasonable explanation of this fact; still it has been my experience. The increased area of dullness is usually twice or three times the ordinary amount of dullness which we find at the root of the lung. We can always detect a small area of dullness in that region, on either side of the vertebral column, at about the location of the bifurcation of the trachea. In addition to this, if enlarged bronchial glands are present, there is an increased area of dullness. And just here I want to call attention to one precaution that must not be overlooked—we must not be deceived by increased muscular development. There is usually an increased muscular development just above the scapulae, rather more prominent on the right side, and this may be a source of error. Remembering this fact, however, if the patient is made to cross the arms in front, leaning slightly forward, by a careful percussion we can map out an increased area of dullness; then on auscultation we may detect other signs, due to pressure of enlarged bronchial glands and from inflammation set up in the bronchial tubes by such pressure and increased secretion which has been poured out, causing contraction of the bronchial tubes. The physical sounds which such a condition would produce can also be heard; we have large-sized sonorous rales, occasionally large-sized moist rales; vocal resonance is increased, and on palpation we find increased vocal fremitus.

A spasmodic paroxysmal cough is always present, even in cases where the patients have not had whooping cough. These paroxysms of coughing occur most frequently at night, probably due to increased pressure when the patient assumes the recumbent position. These paroxysms recur frequently during the night, and after a while the patient will cough up a little mass of tough inspissated mucus, which has been poured out because of pressure of the bronchial glands upon the mucous surfaces. The prolonged efforts of coughing finally dislodging it, the patient then becomes quiet until there is a re-accumulation, when there is a recurrence of coughing until another piece of mucus is dislodged, etc. In my experience this cough has been so persistent and characteristic as to always attract attention.

There is no question that the bronchial glands may become infiltrated and enlarged without tubercle being present, but that they may become a source of danger afterward seems to me unquestionable. These glands may become infiltrated and enlarged as the result of absorption of septic matter from the mucous surfaces; or the result of inflammatory exudation, and the glands may afterwards take on caseous degeneration; they may break down and ulcerate, becoming a suitable soil for the development of tubercle. And considering their location, just at the gateway of the lung, where germs brought in with the current of air would first affect a lodgement, where the current impinges against the bronchial wall—if this soil is favorable, we may expect a rapid tubercular development; then extension to other parts of the system may be effected through the lymphatic channels or by direct continuity.

As to treatment: Internally I usually give syrup of the iodide of iron, syrup of hydriodic acid, cod liver oil, etc., and locally the application of iodine, painting over a strip as large as my hand between the shoulder blades, and a space about the same size in front, over the upper portion of the sternum; this should be repeated at first as often as it can be borne, and later at longer intervals. Under this plan I have seen many cases recover; the enlarged glands have disappeared, and the danger of the development of tuberculosis has been lessened.

DR. J. A. LARRABEE: Are there not more glands around the entrance to the right lung than the left? And would this not account for the more frequent occurrence of enlarged bronchial glands upon the right side?

DR. F. C. WILSON: I have never compared the two sides in post-mortem examinations as to the number of glands, but it is a fact that in the majority of cases I have seen the glandular enlargements have occurred upon the right side.

DR. P. F. BARBOUR: One of the main features of my paper was to bring out the diagnosis of enlarged bronchial glands as clearly as possible. It is not a condition that can be demonstrated as clearly as pneumonia, or pleural effusion, but it is no more difficult to demonstrate than many cases of abdominal or thoracic tumors.

What has attracted my attention mainly, and the only symptom that I have been able to obtain in the majority of cases, is stenosis of the bronchus where these glands are situated. Reasoning by exclusion and knowing that all other causes which could produce such compression are rare in the adult and extremely rare in the child, it practically leaves enlarged bronchial glands as the only cause of compression in this region. After you detect stenosis of the bronchus at this particular location, and have no reason to suspect any of the other causes, such as mediastinal abscesses, etc., then practically the only thing left is compression by enlarged bronchial glands.

I have been able to get marked dullness on percussion in but few cases, and have relied mainly upon auscultation.

That these glands frequently become tuberculous has been proven by autopsies made by Dr. Loomis.

I wished particularly to call attention to the fact that these glands become enlarged after measles and whooping cough, and are then especially liable to become tuberculous. There can be no doubt that after these glands have become enlarged and undergone inflammatory and possibly degenerative changes, that the liability to tuberculous development is greatly increased.

I think we can recognize these enlarged glands and treat them, securing their return to the normal before the tubercle germ has gained access to them, and we may in this manner prolong the life of our patient.

Of course if a scrofulous condition is present, if there are enlarged glands in other parts of the body, or adenoid growths in the pharynx, we should be all the more careful to examine for enlarged bronchial glands.

Result of a Hoffa Operation.—HOFFA (*Verhand, d. deutsch. Gesellsch. f. Chir., xxiii, Congress, 1894*) showed a specimen obtained from a three-year-old child who died of diphtheria after complete recovery from his operation for congenital dislocation of the hip. The pelvis showed that a good joint had been formed. The new acetabulum, which at the time of the operation was soft and spongy bone, was found to be covered with a complete layer of hyaline cartilage.—*Am. M.-S. Bull., 1896, ix, 97.*

Abstracts.

PRACTICAL EXPERIENCES WITH ANTITOXIN.

KORTRIGHT (*Bklyn. Med. Journ., 1896, x, 87*), in an excellent article, after considering the mortality from diphtheria before and after the general introduction of antitoxin in medical practice, discusses the danger of injecting air into the circulation; the danger of injecting antitoxin directly into the circulation; the danger of coagulation itself, eruptions and sepsis. He recapitulates as follows: Antitoxin serum is a remedy of great power in the treatment of Klebs-Loeffler diphtheria. Its use is followed in a certain proportion of cases by complications that are disagreeable, painful or dangerous. These complications are more frequent where antitoxin has been given in cases of false diphtheria. Hence the drug is not to be lightly used, and only after bacteriological examination has shown the presence of the proper bacilli. A test of the purity of the preparation should be made immediately before use by giving a precautionary injection into some lower animal.

EXPECTORATION IN PUBLIC PLACES.

DRS. BIGGS and PRUDEN (*Med. News, 1896, lxviii, 132*) have made to the New York City Board of Health the following report and recommendations, which were adopted at the last meeting:

"It has been for a long time well known that the expectoration of persons suffering from laryngeal or pulmonary tuberculosis (consumption), pneumonia, influenza or la grippe, and from diphtheria, contains the specific germs of those different diseases, and is capable of inducing those diseases in others.

"There is, furthermore, much evidence that a similar condition exists in certain more readily communicable diseases, such as scarlet fever, measles, and whooping cough.

"In regard to some of these affections, the danger from the expectoration in public places is, of course, small, as the patients are ordinarily confined to their homes during the infectious period. But this is not universally the case. It has long since been shown that the chief means for the transmission of consumption is the dried and pulverized sputum of persons suffering from this disease. Diphtheria, influenza, and grip are also easily communicated in this way during certain stages of the disease. Catarrhal affections may also be communicated through dry spittle mixed with dust.

"These germs are liable to be gathered on the feet and on the skirts of women and taken into private houses, where the most perfect ventilation will not stay their effect.

"We believe that the time has now arrived when the people of the city of New York will heartily support the adoption of such sanitary measures as may seem necessary and expedient for the abatement of this widespread nuisance and source of danger.

"We would recommend the following resolutions:

"*Resolved*, That notices be posted in all public places and in all surface and elevated cars in this city, signed by the Board of Health, warning passengers against expectoration upon the floors of these conveyances; and, further, that similar notices be posted in the stations of the elevated roads, warning against expectoration upon the platforms and stairs or on the floors of the stations.

"*Resolved*, That similar notices be posted in the halls and assembly-rooms of all municipal and Federal buildings in the city.

"*Resolved*, That the municipal authorities be requested to provide sufficient and proper receptacles for expectoration in such public places as are in their control, and that the managers of the elevated roads be requested to provide similar receptacles sufficient in number for their stations and platforms, and that in all cases these receptacles shall be kept in a cleanly condition.

"*Resolved*, That the officers of the Manhattan Elevated Road be requested to give peremptory orders to their guards to restrain from and prevent, so far as possible, expectoration from trains into the streets, and to secure the enforcement of these orders."

FOUR CASES OF CECAL HERNIA.

W. O. ROBERTS (*Med. Age, 1896, xiv, 43*) reports four cases of this rare affection. In all herniotomy was performed because of strangulation; all had been victims of inguinal hernia for some time; and all were males—two old men and two children. In three instances (as is usually the case) the hernia was located on the right side, once only on the left; in all there was a complete sac, in which were found the cecum and appendix, which constituted the entire contents save in one instance, where there was a considerable portion of ileum. In each, an operation looking to radical cure was performed, and recovery was prompt; and up to the present time there has been no recurrence.

In the first child, one year and three weeks old, the symptoms were those of dysentery. It was impossible to reduce the hernia by manual means and herniotomy was agreed upon. In cutting down to the sac, it was found to be very thick; making a slight puncture, it was found to contain little or no fluid; dividing the sac thoroughly the appendix was found, and protruding through its posterior wall was a pin, the head being in the end of appendix, with about half its length protruding through the wall. The appendix was removed, and the stricture divided; the cecum, which composed the remaining contents of the sac, was reduced, and the canal closed. This patient made an uninterrupted recovery, and there has been no further trouble as far as the hernia is concerned.

The last case was a child about five years of age, who had had a hernia for quite a long time and had worn a truss, but the latter had never given comfort and did not keep the hernia up when the child cried or strained at stool. The truss was removed and preparations made to operate the next day. That night, however, the hernia became strangulated. There was considerable fluid in the sac, the solid contents being simply the cecum and appendix. The hernia was returned, the sac removed, and the opening closed. The child recovered without a bad symptom.

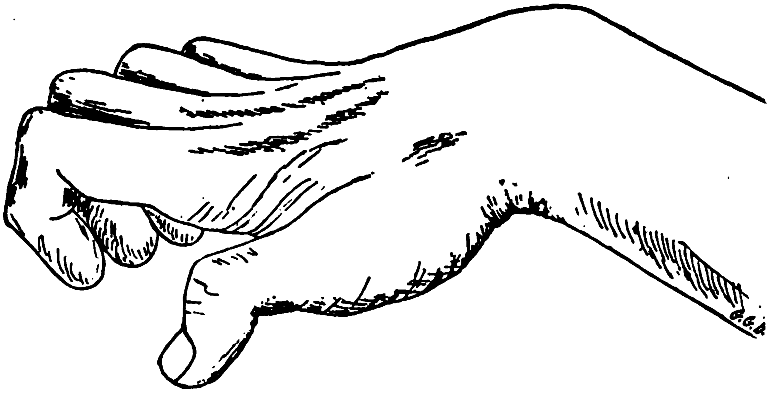
SOLANUM CAROLINENSE IN THE TREATMENT OF EPILEPSY.

C. F. Barber (*Journ. A. M. A., 1895, xxv, 1023*) after a careful trial of this drug, deduces the following conclusions: 1. That *solanum carolinense* is not a substitute for the treatment now generally accepted for epilepsy. 2. That it is a preferable substitute for the bromide treatment when compared with the biborate of soda. 3. That it unquestionably has an influence over the disease, although mild. It sufficiently controls the disease, so as to warrant us in substituting it for a time to relieve our patients of the depression produced by the bromide treatment. 4. Its toxic effects are nil.

INJURIES TO NERVES IN FRACTURES; REPORT OF TWO OPERATIVE CASES IN FRACTURES OF THE HUMERUS AND CLAVICLE.

Gwilym G. Davis reports (*Annals Surg., 1896, xxiii, 147*) the case of a boy, aged five years, suffering from contraction of the muscles of the right hand following a fracture of the lower end of the humerus. The following history was obtained: Six weeks previously he had broken his arm at the elbow, and on the removal of the splints the following condition was found. The forearm was flexed on the arm at an obtuse angle, and all the fingers were likewise flexed. Movement at the elbow-joint was impaired, as was also rotation of the radius. As the boy sat he supported the injured member with the arm of the opposite side. The wrist-joint was freely movable, but when an attempt was made to extend the hand the fingers were brought into extreme flexion. With the fingers extended the hand was flexed firmly on the forearm. There was a scar on the forearm, said to have been caused by a tin splint; it was, however, extremely superficial, not being attached to the deep fascia. The child was pale and somewhat strumous-looking, but otherwise appeared well.

Massage and electricity were ordered for the patient by Dr. Goodman, under whose care he was, and the flexor carpi ulnaris and one or two of the more tense common flexor tendons cut. Some improvement followed and the patient left the hospital, but returned later. The condition, then, five and a half months after the accident, was as follows: The movement at the elbow was good, pronation and supination limited, and apparent shortening of the flexor tendons. When the fingers were extended the hand was flexed tightly on the forearm, making about a right angle with it. When the hand was extended to about forty-five degrees the fingers became contracted, and on attempting to farther extend the hand the fingers became still more strongly flexed at the phalangeal joints, though they did not become flexed at the metacarpo-phalangeal joints, but remained either level with the back of the hand or slightly above it. (See figure.) The thumb was not so markedly affected as were the fingers. The scar on the forearm below the elbow was too superficial to seri-



Contraction of flexor muscles following fracture of humerus at the elbow joint.

ously involve any of the nerves or muscles, and was insufficient to account for the contractions present.

On examining the elbow, evidences of the fracture could be found in a bony prominence just above the joint extending from the tendon of the biceps inward. The contraction of the flexors of the fingers pointed unmistakably to an implication of the median nerve, and that of the flexor carpi ulnaris showed that the ulnar also was somewhat involved. As the muscles supplied by the median nerve were the most affected, and as the prominence of bone near the middle of the bend of the elbow was quite pronounced, it was decided to investigate this locality first, operating on the ulnar, if necessary, later. An incision to the inner side of the biceps tendon was made, and it with the brachial artery displaced outwardly. The median nerve was exposed and found running alongside of a fragment of bone about three-quarters of an inch long and a half an inch in width, firmly fixed to the anterior surface of the humerus. This fragment was drilled away by an electrical drill and the median nerve allowed to resume its normal position from which it had been pushed by the fragment. The wound was closed by the subcutaneous suture and healing occurred by primary union.

For the week following the operation improvement was rapid, the movements of the fingers being much increased. Then, for a while, little change was noticed and massage was ordered, and improvement again became more noticeable until, when the child left the hospital after a few weeks, he had begun to use the hand, pronation and supination was much improved, the fingers and hand could be extended considerably more than before the operation, and while the cure was not yet complete, he was very much improved and a steady betterment of the condition was going on.

A curious fact in the case was that when the hand was flexed on the forearm and the fingers clinched, the child could move the fist to and fro. The thumb was quite free in its movements and certainly less affected than the fingers. With the hand firmly flexed the fingers could be flexed and extended freely, although there was some loss of power. There appeared to be no absolute paralysis of any of the muscles, and while the position of the hand resembled that seen in wrist-drop, and might cause one to suspect implication of the musculo-spiral nerve, still the perfectly free movements at the wrist showed that this was not the case. Attempts at forcibly straightening the fingers provoked spasm of the flexor muscles, but after the operation by steady traction they could be stretched almost their full length.

RENAL COLIC IN INFANTS.

At the meeting of the Royal Medical and Chirurgical Society of London, on January 14th, Dr. R. A. Gibbons read a paper on "Renal Colic in Infants," and related six cases in patients whose age varied from six to twenty-three months. Five of the patients were males. All the cases were met with in private practice and the children were the offspring of gouty parents. The symptoms were sudden onset in the midst of apparent health (in one case during sleep) of acute abdominal pain, accompanied in some instances by rise of temperature to 100° to 102° F., in others by normal or sub-normal temperature. Either at once or at a subsequent visit it was possible to ascertain that there was acute tenderness in one or other loin, and it was observed that the child lay in the nurse's arm upon the unaffected side. During the attack the legs were drawn up and the thighs flexed upon the abdomen. One or both testicles were retracted. The attack subsided in from 24 to 36 hours, leaving the child prostrate but otherwise free from evidence of disease. The urine passed during the attack was clear but contained a trace of albumin and, under the microscope, free blood cells and crystals of uric acid. Later, in some cases, small concretions consisting of crystals of uric acid bound together by mucus or of uric acid in a mortar-like condition were passed, but no distinct calculi. The cases were treated by hot applications to the tender loin and by the prescription of a mixture containing compound tincture of camphor, bromide of ammonium and carbonate of lithia. Dr. Gibbons distinguished shortly between these cases of true renal colic and those of renal pain or uneasiness, due to the passage of uric acid in a fine condition. In several of the cases the child had a subsequent attack on one more occasion.

THE VALUE OF LUMBAR PUNCTURE OF THE SPINAL CANAL.

RIEKEN (*Deutsches Archiv für Klin. Med., Medicine, 1896, ii, 130*) gives a report of the cases in which lumbar puncture of the spinal canal has been performed in the clinic of Quincke, at Kiel, since 1891.

The cases, thirty-five in all, are described in outline, and are presented also in tabular form. They embrace simple inflammatory meningitis, tubercular meningitis, chronic serous meningitis and chronic hydrocephalus, tumors of the brain, and one case each of acute myelitis, hemorrhagic pachymeningitis, cerebral hemorrhage, uremia with tertiary syphilis, syphilitic encephalomalacia.

The conclusions, which pertain chiefly to the diagnostic and therapeutic value of the procedure, are in the main as follows:

1. In lumbar puncture great attention should be paid to the measurement of the pressure of the spinal fluid. Any pressure above 150 mm. is certainly pathological. A moderate increase in pressure with severe pressure symptoms speaks for an acute disease process, while a very marked increase in pressure with but moderate or slight pressure symptoms gives evidence of a chronic affection. In other words, the pressure symptoms in brain and cord disease depend not so much on the absolute amount of pressure as upon the rapidity with which the pressure increases.

2. The richness of the cerebro-spinal fluid in albumin is normally less than .1 per cent. In acute affections the percentage may be as high as .2 or more.

3. The amount of fluid that can be withdrawn depends upon the pressure and the capacity of the ventricles. This fluid is generally clear. It contains more cellular elements in the acute inflammatory processes.

4. In tubercular meningitis bacilli are frequently demonstrable (Lichtheim and Fürbringer).

5. Blood may sometimes be obtained in cases of hemorrhage into the ventricle.

6. Rarely the free communication between the spinal subarachnoidean space and that of the brain, and with the cerebral ventricles, may be shut off by pathological conditions, and thus the diagnostic value of puncture be limited by failure to reveal intracranial pressure and the character of the intra-cranial fluid.

7. Therapeutically, lumbar puncture relieves pressure. In none of the cases of tubercular meningitis here reported was there more than temporary relief.

In the cases of serous meningitis, however, benefit was seen to follow the operation. "In cases 2 and 5 (acute serous meningitis) the improvement in the symptoms followed so immediately the puncture that there could be no doubt of their connection." The removal of fluid in these cases, even though it may not be a life-saving operation, ameliorates the condition of the patient and permits of a more rapid absorption of the remaining exudate by the veins and lymphatics. Rieken firmly believes that future experience will prove that lumbar puncture is a valuable therapeutic procedure, comparable to pleural and abdominal puncture.

The technique of the operation is minutely described.

TREATMENT OF SEVERE HEMORRHAGES IN INFANTILE PERTUSSIS.

Among the accidents (*Trib. Méd., Am. M. S. Bull., 1896, ix, 123*) during the course of pertussis, one meets, rarely it is true, with hemorrhages. These may come from the nasal fossa, the pharynx, the region of larynx, but also from the lung, resulting in a true hemoptysis. Hemorrhage is the result of rupture of an over-filled or strained vessel wall, during the venous congestion which accompanies the paroxysm. Usually even the hemoptyses are not alarming, but at other times they may be of serious importance, as in two cases which are related. As a therapeutic measure the author uses a 1:1,000 solution of bromoform in alcohol by inhalations. A small glassful of this solution warmed to 50° C is poured upon a plate, and the child leans over it and inhales the vapor slowly and regularly for five to six minutes. Although it may excite cough at first, it quickly checks it—for by its anesthetic effect it produces a local contraction or temporary obliteration of the blood vessels. The author repeats the inhalations every two hours. The inhalations seem also to have a distinct effect upon the evolution of the disease itself, and on eleven cases of hemoptysis treated in this epidemic by this method nine cases made an immediate recovery. It is also well to allow this solution to evaporate in the sick room. In no case has he seen any pulmonary congestion following the treatment.

REMARKS ON THE SIGNIFICANCE OF MICRO-ORGANISMS IN MILK.

Freeman (*Am. M. S. Bull., 1896, ix, 104*) summarizes as follows: 1. Milk, as delivered in cities, contains a vast number of bacteria, their presence being due to defective dairy methods and slow delivery of milk to the consumer. 2. A large amount of sickness has been caused by the presence in milk of the germs of typhoid fever, diphtheria, scarlet fever and tuberculosis. 3. The number of these pathogenic micro-organisms in milk can be materially diminished by proper dairy inspection and control, while in tuberculosis proper legislation might lead to the stamping out of this disease in cattle.

TREATMENT OF ASTHMA IN CHILDREN.

In an attack of asthma (*Mal. des Enfants, College and Clin. Rec. 1896, xvii, 14*) place the patient near an open window, without putting him in a draught, apply hot poultices with mustard in them to the extremities, and prepare fumigations by burning datura or nitrepapers, or by placing a few drops of pyridine upon a warm plate. In other cases relief is afforded by pouring a few drops of ether or chloroform on a handkerchief, which is held near the nose. Often much relief can be obtained by keeping water boiling in the room by means of an alcohol lamp. In the boiling water may be placed a few eucalyptus leaves or a few drops of oil of eucalyptus. The following mixture may also be given every quarter-hour in the dose of a dessertspoonful:

Tincture of belladonna,	5 to 10 drops
Tincture of grindelia,	10 to 20 drops
Tincture of lobelia,	20 to 30 drops
Ether,	2 to 4 drachms
Syrup of orange,	4 drachms
Water,	3 ounces.

When the attack is very persistent moderate doses of antipyrin sometimes give relief.

Should acute bronchitis or pulmonary congestion supervene the chest should be enveloped in a mustard plaster, the fumigations or inhalations already named be ordered, and a teaspoonful of the following given every fifteen minutes:

Tincture of belladonna,	5 to 10 drops
Syrup of ipecac,	2 drachms
Syrup of orange,	1 ounce
Codeine,	2 grains
Ether,	1 drachm
Water of orange flowers,	2 ounces.

Between the attacks the following will prove useful:

Potassium iodide,	1 to 2 drachms
Syrup of tolu,	6 ounces
Syrup of orange,	6 ounces.

A teaspoonful after meals.

The bowels should be kept moved by some gentle laxative, the food should be very simple, the body should be rubbed daily with a coarse towel or bathing glove, exercise in the open air is to be insisted on, and, if possible, a mountain climate is to be sought.

TERATOMA OF COCCYGEAL REGION.

Dr. Stimson presented to the N. Y. Surgical Society (*Annals Surg., 1896, xxiii, 187*) a specimen of bone, resembling somewhat a jaw and containing teeth, which formed part of a tumor he had recently removed by operation from a child five years of age. The tumor was situated between the coccyx and anus and had existed since birth, but had increased notably of late; it was about three inches in diameter and rose nearly as much above the normal level of the region. He made a longitudinal incision over its most prominent part and encountered the sac of a dermoid cyst containing semi-solid white, cheesy substance and the bone already referred to, which had puzzled him during the preliminary examination, as he was unable to determine whether it was a part of the tumor or the distorted, movable coccyx. The dissection was a somewhat tedious one, it being necessary to go up between the rectum and coccyx, but it was completed without wounding the gut.

DISLOCATION OF THE HEAD OF THE FEMUR CONSECUTIVE TO TYPHOID FEVER.

DR. A. B. HIRSH reported to the Philadelphia College of Physicians (*Annals Surg., 1896, xxiii, 212*) a case of a girl, fourteen years of age, who had an attack of typhoid fever, complicated by subgluteal abscess formation and distention of the acetabulum. When Dr. Hirsh was called in, the head of the femur had slipped up on the dorsum of the ilium, where it remains. The patient walks very well with a high heel. It is now five years since the dislocation occurred; all apparatus has been laid aside.

A Contribution to the Statistics of Adenoid Vegetations of the Naso-Pharynx.—As the result of an extended clinical study, ARSLAN, of Padua (*Ann. d. Malad. de l'Oreille, du Larynx, etc., 1895, No. 12, p. 509*), has arrived at the conclusion that adenoid vegetations of the naso-pharynx are of frequent occurrence in Italy. He maintains that heredity and dyscrasic diseases play the principal *rôle* in the etiology; next in importance follow humidity and infectious processes. Operative treatment should, if possible, be concluded at a single sitting. The Moritz Schmidt incision, followed by scraping with the finger, should constitute the procedure of choice. Ethyl bromide is the best anesthetic for the purpose, and is far superior to chloroform, to ether, and perhaps also to nitrous oxide. In all cases in which the presence of adenoid vegetations in the naso-pharynx is detected the growths should be removed, even if not voluminous. All children should be subjected to a naso-pharyngeal examination before being admitted to public or private schools, to institutions for deaf mutes, or to other educational institutions.—*Med. News, 1896, lxviii, 75.*

Correspondence.

To the Editor of "Pediatrics."

Dear Sir—In olden times the work *καλός* meant beautiful, or handsome, and *ἀγαθός* meant, and means yet, good. The Greeks, having the idea that all that is beautiful must be good, used these two words sometimes as synonymes, sometimes they combined them and said *καλοςκαγαθός* (*καλός καὶ ἀγαθός*). In the living Greek *καλός* means good, and nothing else.

When I saw the title of your excellent periodical I thought of this Greek view and asked myself: Would it not be handsomer and therefore better to give instead of an English corruption the beautiful Greek word Paidiatreia, the more so as in this exceptional case the English pronunciation is identical with the Living-Greek pronunciation? I understand very well the anglicizing of *Παιδιατρεία* into Pediatry, or as the lexicon of Dr. Foster has it, Pædiatry, from *παῖς, παιδός* and *ιατρεία*, but I am at a loss to explain Pediatrics, except by assuming a common error of foreigners who do not understand living Greek, and make impossible (*ἑλληνοφανής*) words by means of a lexicon. I know Pediatrics has been adopted as a regular English word, but if it is derived from *παῖς παιδός* (child) and *ιατρικόν* or *ιατρικά* (remedy-remedies) it would be a deplorable word, because such a combination does not exist in Greek. We can only say *ιατρικὰ τῶν παιδίων* or *ιατρικά διὰ τὰ παιδιά*.

We are men of science and wish to teach only what is true and correct; let us try to be always scientific in our lexicology.

336 E. Fifteenth St., New York. Dr. A. Rose.

New Hospital for the Treatment and Investigation of Tuberculosis.—A society for the establishment of a curative institution for tuberculosis has been organized in Austria, and by private subscriptions has been enabled to purchase land for the realization of its purpose. The site secured is in Alland, in Lower Austria. It is proposed that only cases susceptible to improvement or cure be received, and in the transfer of patients preference is to be given to the two greater Vienna hospitals. Resident physicians are to be appointed, who will be expected to promote the scientific study of tuberculosis and the most approved methods of nursing and treatment. In scientific features, the new hospital is expected to develop a most advanced position.—*Med. Rec., 1896, xlix, 130.*

JOHN H. RIPLEY, M.D.

PEDIATRICS

Vol. I. MARCH 15th, 1896. No. 6.

Obituary.

JOHN H. RIPLEY, M. D., NEW YORK.

Strange, is it not? that the myriads who
Before us pass'd the door of Darkness through,
Not one returns to tell us of the Road,
Which to discover we must travel too.

THE realization of the end of all earthly association with one whose intimate friendship was enjoyed for nearly a quarter of a century brings with it a shock that numbs the adequate expression of an overwhelming sorrow. The veil which drops between mortality and eternity leaves us with an inexpressible longing for another word, another look, another touch. The awe and mystery of death when thus emphasized assumes a new and thrilling significance which no philosophy can explain and no resignation can assuage. There was a something in the personality of Dr. Ripley giving such an impression of inherent strength, reserved vitality and assertive positiveness that his sudden taking off was more than an ordinary surprise. It was at a time when he was just preparing to enjoy the fruits of his arduous labors and to realize the well-earned rewards of his enviable professional distinction. There is now nothing left of him but his memory and the many lessons clustering around it of a well ordered and successful career. The tribute tendered to him in a journal of Pediatrics is a becoming recognition of his work in a specialty which commands the highest talents of the most accomplished physician. That he took a leading rank in that department is a proof of his superior qualifications as a well-educated all-round family physician. Indeed, he represented the general practitioner in the broadest sense—a type which, unhappily, is now becoming extinct. His indefatigable industry, his extended opportunities for clinical study, his careful pathological investigations, and his thoroughness in mastering essential details made him equally at home in the sick room of a child or adult, and always ready for any emergency, medical or surgical. His acknowledged abilities along these varied lines commanded for him an extensive consultation practice and brought him in frequent contact with the leading specialists in all the different branches. His profound and accurate knowledge of general pathology often served him in differing in opinion from his colleagues, and he not infrequently was in the minority in maintaining opposite views and in valiantly vanquishing his opponents. Careful and painstaking in the examination of a case, he was always positive in his opinion when the diagnosis was made. Although abreast of the advances in medicine and surgery he was always judiciously conservative in indorsing radical or untried methods of treatment. His successful career demonstrated the real value of work when combined with talent, as his was a struggle against odds from the beginning. During his student days he supported himself by teaching a district school in Connecticut, and finally was enabled by the same means to pay his way through medical college and eventually establish himself in a metropolitan practice. It was this early training that made him the successful teacher in the hospital ward, and not only schooled his mind to the real necessities of the student but laid that foundation for skill in diagnosis which he possessed in an eminently demonstrative degree. His writings, although not numerous, were of a thoroughly practical character and from the start won for him the reputation of an accurate observer and logical thinker. His most important contributions to Pediatrics were articles on scarlatinal nephritis and its complications, and the treatment of croup by tracheotomy, both of which were largely quoted and duly accepted as authoritative.

During the most of his professional life he was devoted to hospital practice, holding positions of Attending Surgeon to Charity Hospital, Attending Physician to St. Francis Hospital, Consulting Physician to the Hospital for Ruptured and Crippled and to the St. Joseph's Hospital. A member of all the leading medical societies he was, in the earlier and less busy part of his career, a constant attendant on their meetings and an active participator in their proceedings.

Essentially a man who had become inured to the discipline of antagonistic conditions, he was naturally self-reliant, and being severely honest with himself always strove to be equally so with others.

We thus briefly sketch a life that commenced in May 16, 1837, and ended Feb. 15, 1896. Not much of a compass when measured in years, but making in itself a little history of patient work and enduring ardor that brings the well-merited rewards for highest duties well performed and most valuable services faithfully rendered.

GEO. F. SHRADY, M. D.

Original Articles.

CRANIOTOMY FOR IDIOCY AND IMBECILITY.*

By Charles L. Dana, M. D.,

Professor of Diseases of the Mind and Nervous System in the N. Y. Post-Graduate Medical School, and Physician to Bellevue Hospital.

THE subject assigned to me in this discussion is that of the Value of Craniotomy and its Indications in Conditions of Idiocy and Imbecility. I undertook to say something upon this subject for the reason that I had a year ago begun to collect and study my own personal experiences in the matter. Last spring I put these into the form of an article, which recently appeared in the *American Journal of the Medical Sciences*, for January, 1896. This article, though written nearly nine months ago, still embodies essentially my views upon this subject. In it I collected a list of 70 cases, excluding Lannelongue's, and made an analysis of them. I found that there were 29 improved, 19 not improved, and 22 deaths. Leaving out many of the old cases, which did not represent truly the present surgical results, I found that out of 22 selected cases there were 6 improved, 10 non-improved, and 6 deaths. These figures conform to my own personal experience in 14 cases, for among these there were 3 improved, 8 not improved, and 3 deaths. Since the writing of my article I have collected a number of other cases, 11 in all, making a total of 81. They are the following

1. *Boy*, *congenital idiot*, *microcephalus*, age? Five operations were done but there was no improvement. The absence of statements about age and other details makes the case of little value.—*Shuttleworth*, *Brit. Med. Journ.*, *1895*.

2. *Child*, *syphilitic imbecility*. Operation, much improved. Reported at a meeting of the British Medical Association, July, 1895. I cannot find the detailed report.—Dr. Shuttleworth, *Brit. Med. Journal*, *1895*.

3. *Boy*, 6 months, *microcephalus*. Operation was done but no improvement followed.—T. Ulmanns, *Verhand*, *der deutsch. Gesellsch. f. Chirurg.*, *xxiii*, *Kongress*, *1894*.

4. *Girl*, 8½ weeks. Operation, death.—T. Ulmanns, *loc-cit.*

5. *Boy*, 4½ years, *microcephalic idiot*, *epilepsy*. Two operations

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* Read at a meeting of the New York State Medical Society, Jan. 29, 1896.

were made and followed by marked improvement 5 months later.—C. Parkhill, Denver, Colorado.

6. *Girl*, 5¾ years, *megalocephalic idiot, thick skull.* Improvement followed the operation, reported a few weeks later.—*Ibid.*

7. *Girl*, 4 years, *acquired imbecility from meningitis when 8 months old.* Operation was followed by death.—J. F. Binnie, Kansas City.

8. *Boy*, 12 years, *congenital idiocy.* He had had fits and could not walk, but was not microcephalic. Two operations were done and improvement followed.—*Ibid.*

9. *Boy*, age 14 years, *imbecile, moral perversion, no paralysis or epilepsy.* Operation was followed by great moral and some mental and physical improvement, which set in 6 weeks later; present at end of year.—A. Spanock, *Neurol. Centralblat, 1895, p. 802.*

10. Similar case, but improvement followed trephining.—Wiegand, quoted in *Kraff-Ebings' Psychiatrii.*

11. *Child*, 8 years, *idiot.* Operation was done but no improvement followed.—R. J. Hall, *Amer. Journ. Med. Sciences, Dec., 1895.*

Among the foregoing 11 cases there were 6 improved, 3 not improved, and 2 deaths. The statistics for the 81 cases are, therefore, improved, 35; not improved, 22; deaths, 24.

This gives a much larger percentage of improvements than I believe really exists, nevertheless there is testimony from all parts of the world that a small percentage of idiots operated upon are benefited. Assumed this fact to be established, there are several questions that at once arise:

1. What class of cases is it that are thus benefited?
2. How much are they benefited, and in what direction?
3. What is the kind of operation which secures the benefit?
4. What are the dangers of the operation? for this latter fact is always to be considered in presenting the case to the parents.
5. Finally, how does the operation act?

In answer to the first question, as to the class of cases most benefited, it seems to me that there are two kinds of idiots and imbeciles whom we may subject to the operation with some expectation of getting help. One of them is the congenital idiots—children whose defect is due to some disturbance in the evolution of the brain before birth, and not to any accident, such as hemorrhage or embolism or trauma or inflammation after birth. This class have, as a rule, small heads. They are not, however, always microcephalic cases. Their heads measure, on an average, one to two centimetres less than that of the normal child. Thus, the great circumference at two years, which is, normally, about 47½ centimetres, in these genitous idiots is 46 centimetres. Congenital idiots in whom the mental defect is associated with a double paraplegia, as well as cases of cerebral diplegia or birth-palsy, are not, in my experience, benefited, though my friend, Dr. Conway, states that he has seen one such case. The cases of idiocy associated with hemiplegia and epilepsy in children are not good subjects for the operation. When, however, epilepsy is associated with a congenital idiocy, it is not a contra indication.

The second class of cases in which benefit is occasionally reported is one in which there is perhaps a less marked mental defect, in which the patients are imbeciles rather than idiots ; in which also there is no great amount of bodily defect, the patients being able to walk, and, to some extent, help themselves. When such patients present striking moral defects, such as destructiveness, precocious sexual habits, sudden obsessions, and in general, are irritable, restless, and difficult to train and manage, improvement has been reported after surgical operation.

The age at which the operation should be begun in the case of patients of the first class, that is, genitous idiots and microcephalic children, should not be above four years, but in the moral imbeciles the operation is effective as late as the period of puberty.

The second point of interest is, as to how much such children are benefited. In all cases the improvement is never a cure ; the patients are simply made more tractable, learn to speak better, to walk more perfectly, to swallow and take their food better, and, in general, they take a new start in mental and physical development. Idiots who were before unteachable, noisy, helpless, become capable of learning a little, of minding the directions given them, and of being more cleanly and manageable.

As regards the epilepsies, there is for a time, at least, a diminution of the fits, and sometimes they cease for a long period, but I am not aware of any positive evidence that the operation causes the epilepsy to abate entirely. We know that in some of these cases of epilepsy associated with idiocy, the convulsive attacks cease of their own accord.

As to the effect upon the moral imbeciles, the operation does not develop, to any brilliant extent, the elemental virtues. But it seems to make some more tractable, lessening the violence of their morbid impulses.

In this connection I should like to add the interesting fact communicated to me by one of the physicians to the Clinton Penitentiary, that deep incisions through the scalp and periosteum have been found to produce a decided moral improvement in some criminal cases.

As to the kind of operation which it is best to perform. In my own experience, the linear craniotomy, with lateral branches, has always been done, and that is the operation that has been performed by most others. Various modifications, such as cutting out large circular pieces from certain parts of the skull, and making the circular furrow around the top of the head, have been suggested, but I do not know of any special advantage that can be derived from them. As to the technical part of the operation I have nothing to say, except that the groove made in the skull should be a wide one and the removal of the bone should be liberally done. Furthermore, a second operation a few weeks or months after the first is often advisable. There seems to be no doubt that the results of the operation do not always appear in the first few months, but that after that time an improvement in the symptoms sets in.

As to the dangers of the operation, they have been rendered practically *nil* through the perfection in its technique, and I believe that special credit is due to Dr. Powell, whose methods have been so eminently successful in his work at the Post-Graduate Hospital. I do not know of any surgeon who has had such a small mortality rate. But with the instruments that he uses, and with the technique that he has devised, I see no reason why every one should not get the same results. So that, so far as the element of danger is concerned, it can be practically eliminated.

I want, in conclusion, to add one word as to the theory regarding its efficacy. The operation was originally devised on the theory that, by cutting open the skull of a microcephalic child, it gave an opportunity for the compressed brain to grow. This theory, which was never substantiated by any facts, and never held by any experienced neurologists, has been, of course, overthrown, though, to me, it has always seemed like overthrowing a man of straw. It is perfectly true that cutting open the skull does not remove any pressure or allow a hitherto confined cerebrum to expand ; it does not in any measure change the condition of the brain which has been destroyed by cysts, apoplexies and scleroses. What the operation does do is this : It has a profoundly disciplinary effect upon the idiot. As I have said in my previous paper : These creatures are often not to be affected at all by ordinary educational methods ; neither rewards nor punishments stimulate their effort or excite their attention. They cry, scream, and throw themselves about without the slightest reference to anything that is said to them or done for them. The parents, as a rule, abandon themselves to despair and yield all their attention simply to gratifying the morbid displays of the imbecile child. I have known a mother to carry an idiot child about on her arm the whole day, only putting it down for a short interval for her meals or while the child was sleeping. This she kept up for more than a year, and at the same time did her housework, cooked, and arranged her table and looked after all the requirements of the home. As soon as the child was placed on the floor or in its crib, it inevitably set up a horrible and persistent screaming, which no amount of severe words or rigorous punishment would affect. In other cases the idiots or imbeciles which are found in institutions suffer, perhaps, from too much discipline and not enough personal attention and the lifting influence of bright and healthy children about him or her.

The operation of craniotomy upon children in institutions attracts the attention of the nurses and of the medical officers, and the children get more care and more stimulating words and help in various directions. I would repeat, therefore, that it is, in my opinion, largely through its pedagogic influence that an improvement in these cases takes place, and that the operation is allied in its effect to a severe piece of castigation. In the very low types of criminals it is a well-recognized fact by philanthropists that discipline and systematic work can only be obtained by actual corporeal punishment in many instances, for nothing else seems actually to appeal to them. In the very lowest grades of intelligence, such as we find in idiots and imbeciles, it is probable that only these very powerful inhibitory influences, such as accompany the performance of a capital operation, can affect materially the intellect of the child. It is through some such explanation as this that I would explain the fact that a second operation on these children may be of benefit.

To quote, further, the conclusion to which I arrived in my previous paper:

" The method by which improvement is brought about is largely a surgico-pedagogic one. All those who have had experience in educating idiots lay stress on the importance of special pedagogics, and craniotomy belongs, in a measure, to this class of therapeutic procedure. It may have some additional value by stimulating the circulation and nutritional activity of the brain."

This view of craniotomy for idiocy and imbecility lends itself readily to humor and those who wish may interpret me as intending to kill the operation by ridicule.

The moral effect of surgery upon patients, however, is a most important one, and I think is sometimes quite sufficient to justify even a serious operation. Dr. White has shown this most clearly in his very valuable article on the "Effect of Surgical Operations *Per Se.*" It makes no difference how we do it. If in one case out of four or five, we succeed in making these wretched ones a little more intelligent, and render their care a little less of a burden to their parents, I think that we may well consider that we are justified even if we only play the role of pedagogue.

Infected Heirlooms.—An English bacteriologist has had the audacity to examine some beautiful old tapestries that have hung for generations upon the walls of a country mansion. He found them teeming with tubercle bacilli. What a blow this sort of thing would be to the possessors of old family relics if its force could be fully felt.—*Am. M.-S. Bull., 1896, ix, 159.*

Death Rate Among Insured Children.—The favorite argument of opponents of child insurance is, says the *Indicator*, that it leads to child murder, and if their statements were to be believed, there has been a heavy increase in mortality among children as a consequence of infantile insurance. They have, however, not only not been able to produce any reliable statistics in proof of this, but such statistics as have been available have all been against their theory. It has been shown in England, for example, that the death rate among the insured has been lower than among the uninsured, and some statistics recently collected by Frederick L. Hoffman, of New York, showing the death rate among children in the large cities of the United States, prove that the mortality among insured children is below the general rate. Mr. Hoffman is a statistical expert, and his figures can, therefore, be relied on. Here are his figures:

Ages.	Insured.	Total Deaths.
Between 1 and 2	61.55	62.78
Between 2 and 3	30.35	35.38
Between 3 and 4	20.35	23.62
Between 4 and 5	15.23	17.47
Between 5 and 6	11.85	11.20
Between 6 and 7	9.04	9.78
Between 7 and 8	6.92	8.99
Between 8 and 9	6.10	8.16
Between 9 and 10	5.40	7.39

—*Sanitarian, 1896, xxxvi, 121.*

DIPHTHÉRIE Á FORME PROLONGÉE.

By Arthur Stern, M. D., Elizabeth, N. J.

THIS particular form of diphtheria was first brought under general observation by Cadet de Gassicourt in 1883. Its literature is not extensive, the American text-books on children's diseases and the text-books of Eduard Henoch and Adolph Baginsky scarcely more than touching upon the subject. De Gassicourt, however, in his "Traité Clinique des Maladies de l' Enfance," treats the subject at great length and with exhaustive detail, and his reasonings and conclusions as there given will repay careful perusal.

Passing its more ephemeral developments, de Gassicourt observes that the chief differentiating characteristics of the disease—those distinguished by their invariable regularity—are, first, its unusually long duration, and, secondly, the relatively permanent character of the pseudo membranes during their presence. These peculiarities, he thinks, are attributable to the fact that on the one hand the infection is so mild as to be favorable to the slow progress of the disease, while on the other the tendency to sepsis and croup is very slight. He reports a number of interesting cases, the duration of some of which covered a period of forty-five days, and of others an even longer period.

Henoch dissents from this view, maintaining that the average duration of the disease is about two weeks, though he concedes that this period is very often exceeded in consequence of relapses and slowly healing ulcerations. He is of the opinion, however, that these irregularities are due to the cicatrization of the wounds. In an appendix to his work he refers to de Gassicourt's theory and observes that, in his opinion, the unusually long duration of the cases in question is due rather to a local predisposition of the mucous membrane to cumulative processes whose effects remain in evidence long after the infection has disappeared.

Baginsky says that the disease very often endures beyond its average time, and that he has observed cases where the pseudo membranes were present for over two weeks.

In "Clinical Studies," recently published by Heubner, 303 cases are reported which were treated with serum, of which one lasted 25 days, another 24 days, and a few others 17 to 20 days, the average duration being about 7 days. In the nature of things it is difficult to forecast the influence of antitoxin on these sub-acute cases of diphtheria, and it is therefore questionable whether "Diphthérie à Forme Prolongée" will be observed under the early use of the serum; nevertheless, it would seem advisable that every case of this peculiar character should be reported with a view to collecting data sufficient for the study of its pathology.

This writing, indeed, is suggested by a case which recently came under my own observation. The patient was a boy of four years; had always been healthy, except, according to the mother's report, had suffered from "Dentitio Difficilis." I was called in the evening and found a temperature of 102, pulse 130, and the tonsils as well as the pharynx covered with pseudo membranes. I treated him with Loeffler's Solution (Menthol, Toluol, Liquor Ferri Sesquichloride, Alcohol). During treatment the membranes showed no change whatever, the pulse maintained an average of 120, temperature 100–101, and the tongue remained coated. From the 24th day in the 4th week the symptoms began to diminish and by the end of the same week had disappeared.

Considering the mild infection, I think the duration decidedly too long to permit of the ordinary classification of this case.

OPHTHALMIA NEONATORUM

By William Cheatham, M.D.,
Professor of Ophthalmology, Otology and Laryngology in the Louisville Medical College, Louisville, Ky.

IN this short paper on Ophthalmia Neonatorum I will give only the treatment that has given me the most satisfaction: On first seeing a case of ophthalmia neonatorum, I warn all the attendants of the danger to their own eyes as well as to those of the patient. Some years ago I saw a grandmother lose both eyes as the result of inoculation from her grandchild, not having been warned of this danger, although the patient made a perfect recovery. On first seeing the case, I order (1) a saturated solution of boric acid, for frequent cleansing; (2) glyceride of tannin, ʒ i, aqua dest. q. s., ℥ i; (3) atropia sulph. gr. ss., saturated solution acid boric, ℥ ss., and (4) argent. nitrate gr. ii, gr. iv, or gr. vi, to aqua dest., ℥ ss. Four droppers are ordered, and the nurse is directed to put on one bottle a red or some colored string, with a corresponding color on the dropper used in that medicine, so the droppers and medicine cannot become mixed. Acid boric gr. xv, vaseline ℥ i, is ordered to be used on the lids to prevent glueing and to protect the skin during the frequent bathing. The bottles are numbered 1, 2, 3, 4 and 5. No. 1 is the boric acid, No. 2 tannic acid, No. 3 atropia, No. 4 argent. nitrate, No. 5 salt water. The following directions are given, the numbers on the bottles only used: Bathe eyes well with No. 1 (boric acid solution) every hour; four times a day, after No. 1 has been used, drop into each eye three or four drops of No. 2 (glyceride of tannin); this cleanses the *cul de sacs* well; the lids should be manipulated thoroughly, and the secretions will come out in coagulated threads; the eyes are to be washed out with No. 1 (boric acid solution again); night and morning No. 3 (atropia solution) is to be dropped in; I do not wait for involvement of cornea and iris. Four times a day No. 4 (argent. nitrate solution) is used after No. 2 (glyceride of tannin) is used, and the lids manipulated well, so as to reach the *cul de sacs;* immediately afterwards, the eyes are flushed well with sodium chloride ʒ i, aqua Oi. Then the lids are well covered with the ointment.

The glyceride of tannin serves a double purpose; by coagulating the secretion it acts as a cleanser, and then its action on the inflamed mucous membrane is favorable. Hydrogen dioxide is sometimes used for the same purpose; I think its use dangerous, as it seems to have an unfavorable action upon the corneal epithelium, softening it and producing abrasions, which are followed by sloughs, loss of vision, etc.

I direct that nothing be used about the eye for cleansing, such as sponges, but instead old linen and clean surgical cotton, or such material as can be burned. When there is much edema of the lids, hot or cold applications are of much service. Recently I have had most excellent results from the use of Formol 1 to 4,000 or 1 to 5,000 sol. In ulceration of the cornea, Formol gives most wonderful results.

When these directions are followed from the first day of the disease, I believe no eyes will be lost.

Sacral Tumors in the Fetus.—Gustav Anderssen (*Norsk Magazin for Læger, St. Louis M. & S. J., 1896, lxx, 100*) reports a case of labor at term in which the fetus could not be extracted, although the lower extremities were delivered. Upon examination it was found that a tumor was attached to the sacral region by a pedicle as thick as the wrist. The tumor was hard and lumpy, but with some soft parts. It was opened, and about a pint of greenish fluid evacuated. Delivery was then readily accomplished. The tumor weighed three pounds after the fluid contents had been evacuated, and was about the size of the trunk of the fetus. It contained a number of cavities filled with colloid substances, and also some cartilage.

ON CHILDREN'S SPINES—HEALTHY, UNHEALTHY, AND OTHERWISE.*

By EDMUND OWEN, F.R.C.S.,

Surgeon to St. Mary's Hospital, and Senior Surgeon to the Hospital for Sick Children, Great Ormond Street, London.

(*Continued from page 204.*)

Treatment.—On the matter of the treatment of vertebral ostitis I need not occupy much time. It is all included in the one word, *rest.* And inasmuch as the weight of the head, and perhaps, also, if the upper part of the body and of the arms has to be transmitted through the inflamed vertebræ when the child is erect on his feet, or sitting up, there is no alternative to keeping him in the horizontal position.

If he is secured in a spinal box, or if—the disease not being in the cervical region—he is fixed in a double Thomas' hip-splint, or in some other safe apparatus, I do not mind his being carried about a little, or raised obliquely, so that he can see what is going on around him. Until the disease is not only quiescent, but, so far as one can tell, until the carious region is actually undergoing consolidation, I would decline to discuss the question of applying a splint and letting the boy get about.

When in due course—after many months, it may be—this happy consummation has been reached, a rigid splint shall be applied. If the caries be in the cervical region, the splint shall extend from the front and back of the chest and from the shoulders, and it shall shore up and fix the occiput and the chin. For this, some would use poroplastic felt, which answers well; but, in my opinion, there is "nothing like leather." For disease in the cervico-dorsal region, the same methods serve.

In the case of cervical or of high dorsal caries, considerable help may be obtained by fixing a band around the child's head and attaching a cord to it which runs over a pulley at the bed-head and hanging a weight of a few pounds at the free end of the cord. Probably this method of extension acts rather by insuring more thorough rest than in any other way.

It is not to be for a moment suggested that the application of a few pounds' weight at the end of the cord can effect a separation of one inflamed vertebra from another; the intevertebral and the common ligaments of the spine would absolutely prevent such separation.

For the dorsal and lumbar regions nothing answers better than the poroplastic felt, which takes it bearings from the pelvic bones, reaching almost to the trochanters, and extending up into the armpits, and worn permanently. In my opinion, the most unsatisfactory of all forms of spinal supports are those made of steel.

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* A Paper read at the Harveian Society of London, 9th January, 1896.

I read in certain articles published in America that, in the treatment of spinal caries by "back-braces" (as our trans-Atlantic confrères call the steel apparatus), one of the objects in view is to "throw the superincumbent weight upon the transverse processes." I am quite at a loss to understand how such an unanatomical theory could have found currency.

Possibly there may be some surgeons present who, years ago, heard me speaking up for plaster of Paris jackets. If so, he may infer from my omission of all mention of them to-night that I have discarded them as useless. Nothing could be further from fact. So long as I was seeing out-patients I continued to use them. I do not say it boastfully, but few surgeons applied more plaster jackets than I did when I was seeing out-patients; I have often applied ten, twelve or fifteen in an afternoon. I say this merely to show that I have had a full personal experience in this treatment of carious spines, and if I were doomed to another spell of work in the out-patient department of a children's hospital, I should most certainly start again with the plaster jackets. For the economical and convenient treatment of caries in the lumbar and in the lower two-thirds of the dorsal region there is nothing to beat them. But for the treatment of caries in the regions of the spinal column above this I have found them quite unsatisfactory. Sayre's jury-mast I tested fully and fairly, and I ultimately discarded it. The movement which it was designed to permit is just what one ought most carefully to guard against, and the theory that a child with cervical caries should be up and about is, in my opinion, quite wrong.

Although dealing with the subject of disease of the spine only in a general way, I must say a few words about two of the most serious complications of the caries: The first is abscess, the second is paralysis.

It is a great characteristic of tuberculous abscesses—and all spinal abscesses are tuberculous—that they come up quietly, and too often without observation. Therefore the medical man who has charge of a child with spinal disease should constantly be on the look-out for suppuration. It is somewhat humiliating when the mother, the nurse, or even the child itself says, "Oh, perhaps you ought to see this lump, though there is no pain in it." Sometimes it happens that the abscess has wandered very far from the stiff region of the spine before it begins to approach the surface, so that even when the disease is in the dorsal or the high lumbar region the abdomen, the buttock and the groin should be overhauled every now and then, as well as the back and the front and sides of the chest.

In the last twenty years or so the treatment of spinal abscess has undergone a marvelous improvement. It was at first thought that the aspirator was going to work wonders in this direction, but the practical surgeon had to discard it as disappointing, if not useless.

The way in which one now deals with a spinal abscess is by laying it open, clearing away its lining of tuberculous granulation tissue, washing the cavity clean with a hot germicidal lotion, drying it, sewing up the incision, and applying pressure by means of bulky pads. Many of the abscesses thus dealt with are straightway cured, but some are found to need supplemental treatment, which may consist in packing the cavity with yards of gauze or leaving in a drainage tube. But the less that one has to do with the drainage tube in these cases the better.

In the treatment of spinal abscesses the truth of the saying is well exemplified, that nothing succeeds like success. And the most successful treatment is that by which the tuberculous focus is cleared away and the cavity is shut in from all risk of septic infection. In those cases in which, after all, a drainage tube has to be inserted, it should be taken out at the earliest possible moment, even if it is found necessary, later on, to re-insert it. Its presence in the wound is an invitation for the entrance of septic-micro-organisms, and, moreover, it keeps up a certain amount of irritation in the cavity. The paralysis which complicates a small proportion of the cases of spinal caries may be due to compression of the cord by granulation tissue, by pus, or by bone. And inasmuch as the disease is situated in the front of the vertebral canal the pressure is usually confined to that part of the cord in which the motor strands are descending. They are unsatisfactory cases in this, that we have not yet quite settled what to do with them. I used to know how to deal with them. I I kept them in absolute rest, and many of them got quite well. I think that I may say that most of them got well. The compressing granulation tissue, I suppose, underwent absorption, and the indefatigable leucocytes, like busy ants, carried away the offending bone grain by grain.

Then we began to think that operative measures might prove—ought to prove—advantageous in the treatment of the motor paralysis. So the spinal canal was opened from behind and all offend ing material was removed from against the cord. Some of those cases turned out extremely well. One cannot say that equally favorable result would not have been obtained without the operation, but one may be pretty sure that in a considerable proportion the cases were regarded as actual "cures by operation," and were reported as such. Unfortunately one could not tell which are the cases which would give this good result. Of course those which were not of too long duration, and were not too miserable and exhausted, would be likely to give a better result than would those for whom the operation was undertaken as a very last resource. But those are just the cases which are most likely to get well without operation.

I must frankly admit that I have no good opinion of this operation of laminectomy, as it is called. When I have a case in hand that might probably be considered a suitable one for it I watch and I wait. I get some of my surgical and medical colleagues kindly to see it with me ; we talk it over, backwards and forwards and over again ; and I end by doing no operation.

The ancient Romans gave to their commander Fabius the nickname of Cunctator because they deemed his conduct in the field slow, and sadly lacking in enterprise ; yet, after all, his method was found to be not without merit. But in the surgery of to-day the method of Fabius is rather apt to be thought unworthy of adoption. So that whenever I am discussing with younger and more active surgeons than myself—men for whose ability and judgment I have the greatest regard—I feel sometimes compelled to take almost an apologetic attitude. To me, hesitating, they would be inclined to use the words which Macbeth's enterprising wife hurled at him when she found him hardly up to date—"Infirm of purpose, give *me* the daggers!"

Let me briefly report two of the cases in which I have recently declined to give officious operative aid:

A young fellow, but not a child, I grant, was under my care in St. Mary's Hospital with cervico-dorsal caries. He had almost complete loss of power in his upper extremities, absolute paralysis of intercostal and abdominal muscles, and entire loss of motion and sensation in his lower extremities. Cerebral control of his lower parts was so completely cut off by pressure on the cord at the carious angle that he had sometimes priapism when his water was drawn off, and he had spastic contraction of his limbs. For nearly nine months he was under my care. No operation was done. A few weeks ago he wrote to Dr. Mitchell Bird, the Medical Superintendent of the

Hospital. Here is his interesting and instructive report, word for word, as he wrote it :

Oct. 30th, 1895.

SIR—"I entered St. Mary's Hospital Sept. 12th, 1892, " was discharged incurable May 8th, 1893. Nov., 1894, I be- " gan to get better, how I knew was because my legs left off " jerking or shooting up when they were touched and they did " not press so hard one against the other, and also I could just " move my toes a little, also I could retain the water when I had " an injection in the bowel, before that the injection had to be " used three and four times before anything would pass. About " February I could move my legs about the bed and began to " get a little sencaision in my legs and could raise up on one " elbow and my bowels were improved more.

" In April I could move my legs about the bed better and " had got more strength and sencaision in them and could turn " over and sleep on my side at night and my left hand had got " stronger so I could grasp anything with it.

" In May I got up and set in a chair for the first time and " had got more sencaision in my legs.

" June 2th. I was wheeled out in a bath chair and set out " in the air every day afterwards when the weather permitted " and gained strength much faster than when indoors. Three " weeks after my bowels worked without the injection and " haven't used it since and had much mor sencasion, about the " later end of June I could bear my waite on my legs but not " walk.

" August 19th. I walked with crutches and was much " stronger and had got much more sencasion and my bowels " had improved and now (Octb. 30th) I still walk with crutches " outside, but I can walk indoor without them by just holding " on the things with one hand. I am pretty strong on my feet. " My bowels have improved still more and also the sencasion " but I haven't got my right feeling same as I had before I was " ill, and when my left had got cold I don't seem to have got " hardly any strength in it."

What a triumphant result this would have been regarded if only a laminectomy had been performed! How well and how convincing it would have appeared in a report of cases following on the operation. But as it is, it—with many other similar cases—is merely a tribute to the efficiency of the working of that able and paternal practitioner who is popularly understood to carry about an hour-glass instead of a thermometer and a scythe instead of a scalpel.

On another occasion I once quoted an Italian proverb which seems specially applicable to the treatment of these paralytic cases. It goes to the effect that with straw and with patience one can ripen that very unpromising-looking fruit, the medlar.

By reference to note-books I might be able to give the clinical records of many a case of paraplegia which has completely recovered under the treatment by masterly inactivity. But, in my experience of medical societies, I have long since learnt that there are few things more wearying than the recitation of dry records of even the most successful cases. The monotony of triumphs palls, and the hearers have to sigh in vain for notes, however brief, of a belated autopsy. But Tommy Nugent's case, a boy of six years, is fresh in our memory at the Children's Hospital, Great Ormond street, where he was admitted as an in-patient last April. For two and a half years he had been treated at one place and another for caries in the upper dorsal region. For six weeks he had been unable to walk. There was total paralysis of the lower extremities, together with spastic contractions and with anesthesia of the lower part of the abdomen.

To make a long story short, we kept him absolutely at rest in bed, making interesting experiments as regards his un-inhibited reflexes, and refraining—without the exercise of any self-denial on my part—from offering any operative interference with his spinal projection. In due course everything came right, and when I examined him at the end of December, I found him able to walk with only a little need of help.

There is, of course, nothing extraordinary in these two reports of recovery of the power of locomotion after spinal pressure from Pott's disease, without operation having been done. But a few years ago so much dust was thrown into our eyes in connection with accounts of recovery after laminectomy, that people began to think that, if the operation was not to work wonders, at least it had come to stay. But, like a heroine in one of those wretched modern society dramas, it has been found to have a discredited past and a hopeless future. Personally I believe that I have quite done with it.

Something must be said, of course, as to the treatment of the feeble spine of the rickety child. The child has probably a big head and flabby muscles as well as a flaccid spine. He must evidently be prevented from sitting and standing ; he must be kept lying down the chief part of the time ; but, if he can, he may run about a little, though if he is allowed to be upon his legs too much the ligaments of his feet and of his knees will be giving way. Fresh air, wholesome food, and massage will do the child good, and as he continues to improve the spine will improve too. That is certain. But I have often seen these unfortunate children fixed up in steel supports with straps and pads. Could anything be more unsurgical? And the error in treatment has sprung from people considering that a child's spine is not a portion of his own body, but is a thing apart and needing peculiar treatment. Paraphrasing an old saw we may surely say, "Take care of the child and the spine will take care of itself."

I think that the educational pressure which has extended even to very little boys and girls has not done them much physical harm, because children have been taught to play and to exercise their muscles as well as their brains. But every now and then we come across a little child who, so far as one can tell, has been prejudicially affected by too much sitting and standing in school, and in some instances by sitting over evening preparation as well. But I am glad to say that my experience is that schoolmasters and mistresses are always willing to listen to the suggestions of the medical man in respect to these children and often to give material help in their treatment. Personally I would prefer being a healthy plowman to a sickly philosopher, but I can quite sympathize with the teacher who tries to prevent a pupil being removed even temporarily from his intellectual forcing house. Nevertheless, in a certain few instances I have thought it right to have weedy girls with what some would call "unhealthy" spines taken absolutely from work for a while and allowed to run wild in the country.

Then, at last, we arrive at that part of my Paper in which I set myself the task of speaking of children's spines which are otherwise than healthy or unhealthy. And I confess that I approach it with a certain amount of diffidence. When I handed in the title of this Essay to the Surgical Secretary of our Society I felt very strongly upon the subject—and so I do now. But when I began to place my thoughts upon paper I felt something like Mr. Acres when, with pen and ink, he calmly set himself down to indite certain contentious phrases. There is a pretty little play by Alfred de Musset, which is written on the proverb, "*Il faut qu'une porte soit ouverte ou fermée*," and the statement of fact contained in the title could hardly be disputed, I should think, even by a lawyer. Possibly any one casually reading the title of my Essay might say, likewise, that a child's spine must be either healthy or unhealthy. ("This was some-time a paradox, but now the time gives it proof.") I have, as I have already remarked, a feeling of diffidence in approaching this class of "otherwise" spines. But I am sure of its existence, and it seems to me to be increasing in size. It is composed of children whose spines are, in my opinion, healthy, but in the opinion of others, whose honesty of intention and judgment I do not for a moment question, unhealthy.

Here is a specimen of the spine of which I wish to speak. The child is thin and poor in appearance, and its back bone, like the rest of the child, is a little feeble. Are you going to call this a case of "affection of the spine," and, therefore, needing special spinal treatment? I say, "certainly not." Others are apparently disinclined to agree with me. So to avoid disputing I place the case under the heading of "otherwise." And, having done so, I intend availing myself of this opportunity for saying that in my opinion it is a dangerous habit to take too special, too narrow a view of the defects and deflections of a child's back bone. The child's spine is far too often looked at, written about, spoken of, and dealt with as if it were something apart from his general being and stood in need of peculiar supervision and custody. How it is that such a misapprehension has come about I cannot attempt to explain. All that I know is that it exists in a very considerable degree, and, for every reason, it is to be regretted.

Here is another child, of four years, whose mother had unhappily discovered, when it was a tender infant, that the social demands upon her time and energy prevented her nursing or even looking after it. So the child was left to be brought up on one or all of the artificial foods which are advertised upon omnibus or boarding. But at last the hysterical remnant of maternal instinct was aroused, and the lady discovered by chance that her child did not sit up straight, and that its back was weak and bent. Her alarm is great, and, acting on the impulse of the moment, she takes her pen and sits down quickly and writes to some professional friend in town, "Who is the best man for spines?"

To which of my surgical confrères have such inquiries not been addressed? Personally I find the questión a somewhat delicate and difficult one to answer, for this question is sometimes put to me amongst the rest. I will have you mark that the mother does not usually ask her country doctor the question. She is, in this crisis, apt to regard him as a man of ordinary common sense and she fears lest perchance he might offer to treat the child. In her dire distress she had rather not place her under the care of a gentleman of ordinary professional skill; she desires to secure the advice and services of some one with peculiar knowledge. She cannot think that the general practitioner who has stood her friend in many a serious illness can understand the treatment of a "diseased" spine. She has always heard that diseases of the spine need very special knowledge and treatment. So off she goes, and the practitioner may or may not hear of the case again. But I think that, as a rule, he does.

From what I see of contemporary practice, I feel compelled to say that I think far too much fuss is being made about a little lateral deviation in a child's spine. I am not referring, of course, to that lateral deformity which is on rare occasions found as an early associate of the stiffened back of tuberculous ostitis, but I am speaking of the slight lateral bending which is so often met with in the back of a growing girl or boy, the spine being as flexible in every direction as a healthy child's spine should be. The family doctor is asked to examine a spine which by chance a governess or a nurse has found to be "growing out," or a little different from the backs of other children. The doctor looks, as he ought to do, at the child itself first, and sees that it is well, happy and contented. So he feels pretty sure that there is nothing very serious the matter before he directs his attention to the spine. He assures himself that the movements of the back are free, he disregards the trifling deviation, and he cheerily says that the back is all right.

The situation reminds me of the "Closet Scene" in *Hamlet*, with the anxious mother, the man, and the apparition. But the resemblance soon breaks down, for in the drama the man could see the apparition and the woman could not. In our case it is the gentleman who cannot see it. The apparition, be it understood, is, in our case, the slight deflection of the child's spine. If you will allow me just for a moment to interchange the speakers, the scene will go perfectly well. The anxious mother, seated at the table, looks the man intently in the face and, pointing to the apparition, says: "Do you see nothing there?" To which the doctor replies, and, most unfortunately, with a slight smile, "Nothing at all; yet all that is I see."

I am sure that I shall be adjudged to have left the field of romance and to have returned again into the daily life of professional reality when I say that the anxious lady is by no means satisfied with her friend's action and advice. Indeed, she has already made up her mind to seek and secure for the child what she is pleased to call 'better advice."

A little while ago a lady came into my consulting room with two children, asking me to examine the back of the elder of them. It was rather a weedy child with a slight lateral curvature, the result of general feebleness and of faulty attitudes. I told the mother that it was a simple matter, and that it would all come right with care and ordinary attention. This assurance evidently relieved her mind, and she then told me that she had already seen a surgeon who had taken a much more serious view of the case than I apparently had done. That he had told her that the child must at once come under his close supervision for some months and be drilled and exercised. I replied that I understood the gentleman to be very attentive and skillful, and that she would do well in placing the child entirely in his hands if she thought fit. She then asked me if I would mind looking at the younger child's spine. A glance at the naked back showed at once that there was nothing whatever the matter with it. And so I told her. She then said that the other surgeon had also examined this second back and had advised that the child should undergo a similar course of drillings and exercises. The lady then asked him in considerable anxiety—so she told me, at least—if he found any disease in, or anything wrong with, this back. He said, "No; but seeing that his elder brother's back is wrong he also may get it; but if I take him in hand he will not." I could not restrain a laugh. For the thought flashed through my mind such prophylactic treatment of healthy spines must open up a vast and profitable field for surgical enterprise. But then I thought that such occupation was scarcely a worthy one for a surgeon to seek. And I am certain that in this the general opinion of the profession would agree.

Here is another case in point. It is that of a schoolgirl of fourteen years. She complains that her back "aches," and she has got into the habit of sitting awkwardly. Her spine moves freely and painlessly in every direction, but still she complains and lolls. Shall that spine be called healthy or unhealthy? There is nothing wrong with it. It is the owner of the spine which is out of health. The worst thing possible for the girl, and for her mother, is to regard this as a case of spinal disease, or, to put it more delicately, of spinal affection. The word "affection," apparently, here comes in usefully—it means nothing or a great deal. Some mothers would not greatly mind their daughter having a little "affection" of the spine, if it entailed her bringing up the child for treatment in London during the months of May, June and July.

What is needed is to see that the girl does not sit or stand too much, and that she does not give herself too much to study. I would be for keeping her, as far as possible, in the open air and in the country. I would certainly get her away from town with its theaters, its hot and stuffy rooms, and from its crowded social entertainments—so called. I would encourage her to play tennis and golf, to ride a pony, or even a bicycle, provided she did not fatigue herself, or put on "rational costume."

I have seen plenty of growing girls with these "otherwise" spines, who have actually and positively "grown out" of their temporary weakness, and that without having the chance of enjoying the advantages to their general health which would have been afforded by the measures just sketched out.

It is only in comparatively recent years that we have had such sad pictures painted for us of weak spines which have not received the most modern methods of treatment. What, then, has become of those girls who, a generation or so ago, had weakish spines? Where are they? They cannot all have perished. My own opinion is that many of them are healthy mothers of families, and that others are leading in one sphere or another useful or even ornamental lives. At any rate, I very rarely see either in professional work or in society any approach to the crumpled spine which henceforth is apparently to be the lot of those whose parents omit to seek the special and persistent treatment.

Let me briefly record another case of collateral interest which I saw at the beginning of last November: A child of five years had a congenital displacement of the head of one femur, for which he was very properly wearing a boot with a thick sole and heel. In his back there was a slight, a very slight, compensatory curve, which had, no doubt, been started before the defect of the hip joint had been found out and the boot thickened. The spine was as flexible as india-rubber and the lateral deviation could be effaced with the greatest ease. I expressed the opinion that his spine was healthy, and with this expression most surgeons, I am sure, would agree. But, unfortunately, somebody else had said otherwise. The mother pressed me upon the subject; still, I nothing saw; yet all there was I saw. She then told me that she had been for what she thought should be "the best advice," and that the gentleman in giving it had greatly alarmed her. He had found serious fault with the child's back and had told her that he must at once have the child sent into lodgings near him so that he might duly exercise and train the muscles. The lady said that she could not well arrange for this until after the Christmas holidays, to which the gentleman rejoined that unless the child were *immediately* placed under his care he would not be answerable for the consequences. She had been made to think that the outlook in this contingency was black as night itself. In her anxiety it is quite possible that she had placed too serious a meaning on what the gentleman had said, or it may be that she did not report her interview correctly—we all know how unfairly, dishonestly, even, the remarks made to, or the account of the treatment adopted in connection with, a patient are carried about. It is a good plan, indeed, to disregard what a patient says concerning his previous treatment whenever the remarks reflect unfavorably upon the medical attendant, unless there is some obvious and unmistakable evidence of confirmation, and even then to exercise judicious skepticism. I will content myself, therefore, with saying in connection with this case that, in his second Epistle to Timothy, St. Paul gave a special caution regarding those who "lead captive silly women.' At the present day, more even than in St. Paul's time, silly women, of both sexes, love to be led captive. The therapeutic dip in the common Jordan of general practice offers them no attraction. They desire to do some greater thing. But I strongly hold that it is our duty as medical men to exert our influence against parents and patients entering such mean captivity. It was George Eliot, I think, who said that medicine was to be honored as a profession but despised as a trade. It would be, I am sure, a very easy business to induce many a mother to sacrifice her time or means over real or imaginary contingent advantages for her child. It is dealing unfairly with our profession, as well as with our patients, if we do not loyally set ourselves against everything which in the least degree even approaches that which might appear to be the opposite to square conduct and upright intentions.

I do not for a moment suggest, nor do I think, that my professional brother was dishonest in the matter, for dishonesty implies gross moral obliquity. I am quite satisfied that he fully believed in the urgency of the need for his treatment in order to effect the child's physical salvation. I should say that he was well-meaning in every sense of the word, but that he lacked professional judgment, and that he had lost all sense of proportion and perspective in a pathological and therapeutic sense.

Not only had he ignorance of that bit of worldly wisdom which was enjoined by the philosopher, *Surtout point de zèle*, but he had actually been *over-zealous* in the prosecution of his work. He had brought himself to think and even to foreshadow to parents that unless the weak-backed girl were put under his treatment she must grow into "Sic a wife as Willie had":

"She's twisted right, she's twisted left,
"To balance fair in ilka quarter;
"She has a hump upon her breast,
"The twin of that upon her shouther—
"Sic a wife as Willie had,
"I wadna gie a button for her."

A Sign of Death by Exhaustion from Insufficient Nourishment in Young Children.—Dr. Seydel (*St. Louis M. & S. J., 1896, lxx, 101*) says that, in all cases in which death is brought about in young children by insufficient nourishment, total disappearance of the thymus gland is an invariable phenomenon. Whether this disappearance may not also be brought about by exhausting diseases, such as fevers, requires further observation. It is to be accepted as probable, as the thymus gland must be looked on as, to a certain extent, a reserve material; and it is highly probable that it is drawn upon to supply nutrient material that may be wanting. Where organic changes are absent, and where on section of emaciated children there is absence of the thoracic glands, it may, according to the author's observations, be taken as a more certain sign of exhaustion by deficient and unsuitable nourishment than narrowing of the lumen of the intestine, which, in point of fact, is as a rule not present.

Disinfection of the Mouth in Scarlatina.—At the Société des Hôpitaux, in Paris, M. Lemoine recently advanced the theory that the period of contagion in scarlatina is at the beginning rather than at the close of the disease.

He regards the secretions of the mouth and pharynx as the dangerous elements rather than the desquamating epithelium, and considers that the disinfection of these cavities should take first rank among prophylactic measures, and that the period of isolation to which cases of scarlatina are at present subjected should be considerably shortened.

This view is important, in that other eruptive diseases, as measles and smallpox, may perhaps be transmitted by the same means.

Until the pathology of these diseases is better known, it seems rational treatment to disinfect the mouth and pharynx, thus possibly rendering a service both to the patient and to the attendants.—*Am. M.-S. Bull., 1896, ix, 150.*

Practical Notes.

Palatable Castor Oil.—By dissolving pure saccharine in a small amount of hot alcohol, then adding to castor oil and mixing thoroughly, then adding oil peppermint to flavor, a palatable castor oil is obtained. While hardly the equal of honey in palatability, it is more pleasant tasting than any other combination of castor oil the writer has ever seen. The following formula is the one used by the writer:

℞	Pure Saccharine.	ʒ ss
	Alcohol.	½ oz.
	Castor Oil.	qs. ad 1 pt.
	Oil Peppermint	5 or 6 gtts. to flavor.

Mix alcohol and saccharine and heat till the saccharine is dissolved; then add to oil and shake well; then add oil peppermint.

Ordinary saccharine is generally impure. It may be readily tested, however, by treating with ether, which dissolves out the benzoic sulphionide, leaving the impurities undissolved.—*Edel, Spatula, 1896, ii, 132.*

Perchloride of Mercury in Whooping Cough.—The *Giornale Medico del Esercito* advises painting the throat of children affected with whooping cough with a 1 per 1,000 solution of perchloride of mercury, going well to the back of the tongue and over the uvula and tonsils every morning. No toxic effect has been observed, and most cases can be cured in from 8 to 14 days.—*Am. Druggist, 1896, xxviii, 45.*

A Remedy for the Incessant Cough of Measles.—The *Gazette hebdomadaire de médecine et de chirurgie* for January 2d contains the following formula, which is attributed to Widerhofer:

Extract of hyoscyamus	2·25 grains
Distilled water	2·2 ounces
Syrup	150 grains

A teaspoonful of this mixture is to be taken every two hours.—*Med. Journ., 1896, lxiii, 131.*

Arsenic in Anemia.—Some of the worst forms of anemia are greatly benefited by arsenic. They are those which result from long-continued inanition and slow convalescence, in which the stomach does not suffer; from primary catarrh; from chronic malaria; from chronic tuberculosis of the lungs; from chronic glandular swellings of a malignant type, either lymphoma or sarcoma. In all of these forms it is highly useful. The dose need not be large, but may be increased slowly. One-hundredth of a grain of arsenious acid, or one drop, or one and a half of Fowler's Solution, amply diluted, three times a day, after meals, are well borne for weeks, even months, without interruption, by a child of four or five years. In malaria, the remedy may be given with quinine (and iron), in other forms with strychnia (and iron); in phthisis, with digitalis.—*Jacobi, Therapeutics of Infancy and Childhood, p. 97.*

Anthelmintic Powder for Children.—Dr. Jose E. Ferran, in the *Medical Week*, November, 1895, recommends the following formula:

℞	Benzonaphthol.	2 Gm.
	Santonica.	1 Gm.
	Sugar.	5 Gm.

Mix, and divide into twenty powders—From two to five powders daily.

After expulsion of the parasites, Dr. Ferran administers benzonaphthol with or without magnesia during from two to four weeks, in order to prevent reproduction of the intestinal worms.—*Medicine, 1896, ii, 149.*

For Tape Worm.—A strong decoction of the common pumpkin seeds will usually expel the pests. This decoction should be taken fasting and followed in twelve hours by a brisk cathartic.

℞	Pumpkin seeds,	ʒ vi
	Water,	qt. ii

Mix and boil down to one quart.

Sig.—Dose for an adult, one wineglassful every half hour until all is taken.—Cyrus S. Reeves, M. D., Lone Grove, Texas.

A Deodorant of Iodoform.—According to the *Journal de Médecine*, spirit of turpentine will at once remove the objectionable odor from the hands after using iodoform, as well as from spatulas and vessels that have been in contact with the drug. A little turpentine should be added to water, and the articles it is desired to deodorize placed therein, being subsequently washed with soap and water.—*Bull. Pharm., 1896, x, 83.*

The Best Method of Sterilizing Hard and Soft Rubber Instruments.—Lannelongue recommends for the sterilizing of hard and soft rubber instruments, subjecting them to the fumes of quicksilver. The instruments are rolled in flannel impregnated with mercury and placed in closed vessels. By a simple test you can demonstrate that the space becomes filled with fumes of quicksilver. The bacteriological examinations show that after a very short time the instruments are thoroughly aseptic. As a lubricant, the author is in the habit of using olive oil ; a few globules of the quicksilver are kept on the bottom to keep the oil sterile. Since these measures have been adopted the author has had the best results.—*Meyers Bros. Drug., 1896, xvii, 63.*

Chapped Hands and Face.

Compound tincture benzoin,	10 min.
Alcohol,	2 fl. dr.
Rose water,	30 min.
Glycerin,	1 fld. dr.

Mix.

Apply to chapped surfaces at night, after they have been washed with soap and warm water and thoroughly dried.

A second application is rarely required. This remedy is equally efficacious to the treatment of fissured, bleeding and sore lips.—*Meyers Bros. Drug., 1896, xvii, 85.*

Serum Injections in Meningitis.—In the case of a seven-year-old boy in whom meningitis had been induced by an infection of pneumococci, Righi (*Gazz. degli Osped., October 24, 1895*) injected blood serum obtained from the patient's sister, who was convalescing from meningitis. After the injection of five cubic centigrams the symptoms of danger disappeared, the fever was reduced, and the patient rapidly recovered health.—*Med. Rec., 1896, xlix, 241.*

Schools and Exercise.—We have laws to prevent children from being sent to work in factories, or to be employed upon the stage, but none to protect them from the equally destructive, incessant schooling in close rooms, without air or exercise. There are too many books bought for Christmas, and too few skates.—*Jacobi, Therapeutics of Infancy and Childhood, p. 94.*

Resorcin in Infantile Diarrhea.—FENWICK (*Brit. Med. Jour.*, Dec. 21, 1895) considers resorcin the most efficient antiseptic in infantile diarrhea. He is accustomed to giving three-grain doses every four hours to infants only a few weeks old without the least toxic effect, claiming to get very decided and beneficial results after the fourth dose.

Editorials.

THE ROENTGEN RAYS.

A FEW weeks ago the Atlantic cables heralded a new discovery by Professor Roentgen, of Wurtzburg. He had succeeded in developing rays of light that would penetrate innumerable substances hitherto considered opaque. At first the reported discovery was looked upon askance by the members of the medical profession, if we may judge from a published authoritative interview with several of the foremost members of the profession, concerning the probable utility of the light for the advancement of the science of medicine, which was published by a leading daily paper. To-day if we could turn the wonderful X rays on the walls of the physical laboratories of this and every other civilized country we would be treated to the surprising spectacle of seeing every physicist and amateur leave work which had before monopolized his interest that he might devote himself to the utilization, adaptation and improvement of Roentgen's discovery.

From reading the accounts in the public press one would gain the impression that there are those, and among them men who have already made their names widely known in the scientific world, who have scarcely allowed sleep to settle over their consciousness since the time when the discovery was first announced, so insatiable is their desire to develop its utility. Already patients with obscure diseases are beginning to ask their medical advisers if the cathode rays cannot let some light in on the nature of their troubles, and, worse than all, the blatant claims of the worst of all quacks, the quack in the profession, are beginning to be doled out to the public through the medium of the press. Enthusiasm over a purely scientific subject rarely reaches such a stage as it has in the instance under discussion, and when it has, or gone further, it presages a bad prognosis. Scientific discoveries are generally hampered, not advanced, by enthusiasm, either in the shape of reception or attempted utilization.

The possibilities of Prof. Roentgen's discovery to advance diagnostic perspicuousness and increase therapeutic resources are certainly great, but these possibilities can only be realized after very essential modification of the cathode rays which are to-day permeative of every structure in the human body, except bone. To obtain a photograph of the bony framework of a living individual may be in some rare instances desirable, more so in the adult, in whom the bones are more liable to disease, than in children. But it is not in this direction that we crave diagnostic light, but rather in obscure visceral and intra-cranial diseases. Already, it is said, the cathode rays have facilitated the discovery of leaden bullets imbedded in human tissues, and it may be that such substances as calculi may sufficiently hinder the rays to be silhouetted. Indeed, we are informed that already Neisser of Vienna has succeeded in obtaining a photograph of renal calculi; and more astounding still, that he has been able to distinguish a phosphatic from a uric acid calculus!

On the eve of what promises to be an epoch-making discovery, particularly to our profession, we await impatiently, yet confidently, for the results of the physicists' ingenuity.

Public Libraries and the Dissemination of Disease.—Libraries have repeatedly been accused of spreading disease. A recent communication from a London librarian to the Westminster *Gazette* shows that precautions are adopted in the public libraries both by London and the provinces. The library receives each day a list of the houses in the parish where infectious disease exists. No books, under any circumstances, are issued to readers in the infected houses.

If books have been loaned to dwellers in one of these houses previous to the outbreak of the disease, notice is immediately sent that the books are not to be returned to the library, but retained and delivered to the sanitary authorities, who undertake to collect the volumes without delay and thoroughly disinfect them.

A fine not exceeding £5 is imposed upon borrowers who return to the library books that have been exposed to infection.—*Am. M.-S. Bull., 1896, ix, 139.*

Society Report.

NINETIETH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Held at Albany, January 28, 29 and 30, 1896.

SEPSIS OF THE NEW BORN.

Dr. M. A. Crockett, of Buffalo, in a paper on this subject, said that a physician of Buda Pesth had carefully observed over a thousand new-born infants, and had come to the conclusion that in most infants a rise of temperature was the first sign of disturbance, and that this would have probably been overlooked, for a time at least, if the clinical thermometer had not been used. The clinical and anatomical signs of infection might be gastro-enteritis, lobular pneumonia, etc. The paths of infection were the navel wound, the food and inspiration. Acute dyspeptic diseases and general pneumonias were rare, and the prognosis was much more favorable than where gastro-intestinal disorder occurred in connection with septic infection. He then reported three cases of sepsis in the new-born, one in his own practice, and two from the practice of Dr. Snow. In his own case, following a normal labor, nothing abnormal was observed for the first six days. The cord had been dressed with borated cotton. On the seventh day the child became restless; a few hours later there was a severe eclamptic attack, with a temperature of 101°; and this was followed by repeated convulsions, and death in fourteen hours. No signs of inflammation were observed around the umbilicus. The convulsions began forty eight hours after the fall of the cord—the usual period of inoculation of the tetanus bacillus. The writer recommended that a sterile ligature be used for tying the umbilical cord, and that it should be applied close to the abdomen. An aseptic dressing should be applied for the first three days, and then this dressing should be changed on alternate days. To secure rapid mummification of the cord, the child should not be bathed until the cord had separated. Out of 230 children so treated, the observations already alluded to showed a diminution in the number of cases of infection from 23 to 3 per cent.

Dr. A. Jacobi, of New York, in discussing the paper said that the author was correct in all his statements. Access to the interior of the infant's body was possible by many channels—the navel, the skin, the mouth and the anus. Aspiration of liquor amnii was not at all the innocent matter many supposed; it was a common cause of sepsis in the newly born. When the infant's skin is maltreated by scrubbing, by the use of bad soaps, by rupturing pemphigus vesicles, etc., it was easy for septic micro-organisms to gain entrance to the interior of the body. The infant swallows the bacterium coli; the inconsiderate washing of the mouth of the newly born caused superficial erosions of the delicate mucous membrane, and so favored the introduction of septic matter. It was known that the meconium is absolutely free from germs immediately after birth, but that it was not germ free after twenty-four hours; hence, either these germs are swallowed or they enter through the anus. The latter was a common occurrence; hence, enteritis of the newly born not infrequently began in the lower part of the large intestine. Septic matter was often introduced into the navel wound by cutting the umbilical cord with dirty scissors used about the patient's house.

Dr. Charles Jewett, of Brooklyn, said that undoubtedly septic infection might take place through other routes than the umbilicus, but he had never happened to meet with such a case. The writer had referred to an elevation of temperature as one of the early and reliable symptoms of disease in the newly born. To this he would reply that it was very common for the temperature to rise from one to three degrees in the first few days of life, and yet the most careful scrutiny failed to detect anything abnormal with the infant. This rise of temperature had been ascribed to the innutrition of this period. The umbilicus should, of course, be kept as aseptic as possible when healthy, but when it became septic, antiseptic dressings were called for.

DISCUSSION ON EARLY AND LATENT SYPHILIS IN INFANTS AND YOUNG CHILDREN.

Dr. George T. Elliott, of New York, opened the discussion with a paper on hereditary syphilis, its diagnosis and treatment. (See next issue of Pediatrics).

NERVOUS MANIFESTATIONS OF SYPHILIS.

Dr. B. Sachs of New York read a paper with this title. He said that syphilis of the nervous system was apt to be a cerebro-spinal affection, and might involve a small area of the brain or of the spinal cord. Cerebro-spinal syphilis was an extensive disease of slight intensity. A child with a mild form of palsy, with speech imperfectly developed or lost, and with symptoms of cortical irritation, might be reasonably considered to have cerebro-spinal syphilis. Cases of idiocy due to syphilis occurred, but they were comparatively rare. A small proportion of infantile palsies only were due to cerebro-spinal syphilis. Out of more than 200 cases in which Dr. Peterson and he had carefully inquired into the etiology, only one was found to be due to syphilis. Ocular palsies occur occasionally in children, and are probably due to syphilis. They are commonly associated with hemiplegic or paraplegic disturbances. Among the spinal manifestations of hereditary syphilis is a spastic paraplegia coming on late in life, and often associated with palsies and complete immobility of the pupils. There is apt to be thickening of the pia with the formation of gummatous growths, and also endarteritis of the brain and spinal cord.

Dr. L. Duncan Bulkley, of New York, said that hereditary syphilis, like syphilis contracted by extra-genital means, was much less common now than formerly. Syphilitic infants were always dangerous to those around them, hence for the sake of both the child and its attendants it was important to recognize the disease and treat it as early as possible. He still felt that the best plan of treatment was by inunctions of half-strength mercurial ointment, applied under the infant's band, but this treatment to be thoroughly effective must be continued long after the disappearance of all symptoms of the disease. For the late manifestations, he favored "mixed treatment," giving the remedy in wine of iron. The syrup of the iodide of iron had proved in his hands an exceedingly valuable remedy in the treatment of infantile syphilis.

Dr. Edward D. Fisher, of New York, said that it was difficult to determine that a cerebral hemiplegia was due to hereditary syphilis; in the majority of cases it could be better explained by cerebral compression, or by menigeal or cerebral hemorrhage. There was a strong probability of hereditary syphilis where a child of ten or twelve years suddenly developed optic atrophy or deafness. The speaker said that he agreed with the last speaker regarding the treatment, except that he preferred in cases where mixed treatment was indicated to give the iron separate from the other remedy.

CONGENITAL DISLOCATION OF THE HIP, WITH EXHIBITION OF CASE SUCCESSFULLY TREATED.

Dr. Halsted Myers, of New York, read such a paper. He said that the anatomy of the condition had become well known through the many recent operations. Some cases seemed to be due to traumatism without malformation, and others in which malformation appeared to be the prime cause. An early diagnosis greatly improved the chances for cure. Before the changes secondary to walking occurred, a reduction was comparatively easy, and retention probable, since relaxation was most commonly found with anteversion and flexion of the neck of the femur, and these were secondary changes. In 302 cases of Hoffa's operation, or some of its modifications, the mortality was between three and four per cent. The latest reports were still better. There had been no death in the last 22 cases of Broca, or in the last 100 cases of Lorenz. The danger of the operation seemed to be almost entirely dependent on sepsis, therefore the utmost care in this respect was necessary. The manipulations of Paci should first be tried, viz.: forcible flexion, abduction, rotation outward and extension, as if to reduce a traumatic dislocation. The limb should be then fixed in an abducted position. After three or four months the patient might be allowed to walk with a protective splint. If this treatment failed after a fair trial, the operation of Lorenz was indicated. Over 80 per cent of his last 100 cases he considered successful; and in 11 out of the 13 reluxations the head of the femur passed upward under the anterior superior spine—the most favorable position, except in the acetabulum itself.

Dr. Myers then exhibited his successful case—a girl, three and a half years of age when first seen. At that time the shortening was 1½ inches, the telescoping and lordosis were marked, as was the limp. The dislocation was reduced by Paci's method, and the joint subjected to rather severe manipulations, with the hope of exciting adhesive inflammation. The limb was fixed in an abducted position, without extension, as he did not believe this was indicated if the muscular retraction had been fully corrected at the operation. The spica bandage had been removed about once a month, and the joint manipulated, and again fixed in an abducted position. Five months later a splint had been applied, which allowed motion at the hip, knee and ankle, but which kept the limb abducted, and exerted pressure against the trochanter. This had been worn night and day for seven months, and the child allowed to walk about freely, with a high shoe on the opposite foot. The shortening was now less than one-quarter of an inch, the joint was firm without telescoping, and motion was free in every direction. The child had walked for a week without any apparatus for a part of each day, and no change could be found in the joint. The splint would be left on most of the time for several months yet. In these cases, the speaker said, unless treated, the shortening, telescoping, lordosis and limp steadily became worse as the child grew, and many of these children suffered pain. Many cases also of very marked deformity and disability were recorded; therefore the speaker urged the adoption of active treatment rather than the old let-alone method.

DISCUSSION ON THE PRESENT STATUS OF BRAIN SURGERY.

Dr. Edward D. Fisher said that experience had shown that the brain could be extensively manipulated, or even considerable portions removed, without great danger to life. Operations on the brain were more especially indicated in (1) cases of traumatism; (2) localized epilepsies; (3) cases of athetosis, whether associated with epilepsy or not; (4) tumors; (5) abscesses of the brain; (6) cases of cerebral hemorrhage; and (7) in cases of microcephalus. It was true that statistics showed that but a small proportion only of such cases were benefited by operation, but one successful case should have much greater weight in indorsing the operation than many failures, provided the operation rest upon a scientific basis. When the athetosis appeared to be due to cortical irritation, removal of the cortex was indicated. In operations for epilepsy, the speaker favored the bone-flap operation, as by this method a complete restoration of the skull was secured, thus removing the danger of subsequent injury. If the dura were thickened, it should be removed. Perfect union would take place even though the bone were stripped of periosteum. A careful observation of the pulse during operations in which the chisel had been used, had failed to convince him that the blows of the hammer produced great shock, as many surgeons claimed.

Dr. M. Allen Starr discussed cases of brain tumor. He said that recent experience seemed to show that only about seven per cent of such tumors were appropriate cases for operation. Their difficulty of access, and the uncertainty attending attempts at localizing brain tumors furnished the principal obstacles to progress in this field of surgery. Statistics showed that the prognosis was the best in sarcomata—even better than in cysts, for the latter exhibited a strong tendency to return. He preferred the flap-operation to the trephine.

Dr. Charles L. Dana took up the question of "The Value of Craniotomy for Imbecility and Idiocy" (see page 243 of Pediatrics). His own personal experience comprised fourteen cases, three of which had been improved, while eight remained unimproved and three died. These figures corresponded very closely with the statistics collected from various sources. The congenital idiot and the imbecile represented the two classes most likely to be benefited by the operation. The former class should not be operated upon after the age of four years; the latter may be successfully treated by operation up to the age of puberty. Only in occasional instances had he seen any benefit from the operation ; it never effected a cure, but sometimes produced a mental and physical improvement. He had always practiced linear craniotomy, using a wide groove and lateral branches. The results were sometimes not evident for several months. It had been supposed at first that the operation brought about improvement by giving more room for the growth of the brain. This view had been quite generally abandoned, and his own theory of the *modus operandi* of the operation was that it produced a profound disciplinary effect on the idiot.

DR. JAMES W. PUTNAM, of Buffalo, said that two cases operated upon by Dr. Roswell Park by craniectomy had exhibited a very great degree of improvement. The death rate was admittedly large, but it was the only hope of relief, and if death occurred from the operation society had not lost a valuable citizen.

DR. B. SACHS, of New York, read a paper on "THE SURGICAL TREATMENT OF EPILEPSY," in which he called attention to the fact that operations for this condition were by no means so frequent in New York City as they had been a few years ago. Surgical interference, in his opinion, was only justifiable in the earliest stages, before degeneration had taken place. It was not sufficient to remove the outer table of the skull, for there might be an exostosis or a spicule of bone within. As children were not very tolerant of operations on the skull, this fact narrowed the field of operations done for the relief of birth palsies.

DR. GEORGE WOOLSEY, of New York, in reporting the results of his experience with operations for epilepsy, said that only one case out of a total of eight could be really called a cure. The operation had only been undertaken in cases in which there had been a severe traumatism of the skull, and after persistent medical treatment had failed to check the mental decline. The speaker favored the use of carver's chisels in doing the operation by the bone-flap method.

DR. WILLY MEYER, of New York, described two cases in which he had used a plate of celluloid to cover up the defect in the skull. He considered this to be the best material yet proposed for this purpose.

DR. JOSEPH COLLINS thought that the discussion thus far had presented an unwarranted narrowing of the field of brain surgery. He called attention to the frequency of cases of purulent infiltration of the brain resulting from chronic purulent otitis—a condition in which nothing but operation was of avail.

Dr. Floyd S. Crego, of Buffalo, said that he had supposed until he had heard Dr. Dana's rather flippant explanation of the *rationale* of craniectomy, that this operation produced its beneficial effect by improving the nutrition of the brain. Surgeons too often failed to continue the medical treatment after the operation.

Dr. E. B. Angel said that there was no necessity for inserting plates of celluloid or other foreign material, as the defect was filled up by nature with a dense fibrous tissue.

Apparent Contagion of Psoriasis.—In spite of the seeming success of Destot's inoculations, the contagiousness of psoriasis has not been accepted. Dr. **Meneau** (*Journal de Médicine de Bordeaux*, December 15, 1895) relates a case in which a psoriasis in a girl of eight years was followed after three years of existence by the same disease upon the scalp of a younger sister who had been in the habit of using the first patient's comb.—*Med. Rec., 1896, xlix, 123.*

Alteration of Milk by Boiling.—Professor Rubner points out that when milk is boiled the albumin is coagulated, but not the casein, and that the question whether sterilized milk has been boiled can be determined by separating the casein by addition of salt and warming to 30° or 40° C., then filtering and heating the clear filtrate to the boiling point. If the milk had been previously boiled this filtrate would not contain albumin, but otherwise it will coagulate on heating to the boiling point.—*Hygien. Rundshau, Pharm. J., 1896, iv, 83.*

Diphtheria Toxin.—It is reported by cable from Berlin that Professor **Brieger** has finally succeeded in freeing the diphtheria toxin from all albuminous compounds. In an article in the July number of the *Zeit. f. Hygie. Infect.*, Professor Brieger stated that as he obtained the toxin more and more nearly in a pure state, the chemical reactions became less and less, and he there stated that he believed these reactions were due to the albuminous compounds thrown down with the toxin and not to the toxin itself. If he has actually obtained toxin in a pure state, he has accomplished an important advance, which may lead to the discovery of methods of separating the toxin, and possibly to manufacture it chemically.—*Med. News, 1896, lxviii, 192.*

Abstracts.

ROENTGEN'S DISCOVERY.

ARTHUR W. GOODSPEED (*Med. News, 1896, lxviii, 169*) says that probably never before has the entire scientific world been simultaneously aroused to such a pitch of excitement as that caused by the recent remarkable discovery of Professor Roentgen, of Würzburg, that it is possible to produce photographic effects through opaque substances such as wood, ebonite, flesh, and similar dense materials, while glass, which we customarily regard as the most transparent of media, obstructs the passage of the cathodal ray.

If we speak of light as that portion of radiation which is capable of affecting the eye, the new agent, or the X-ray, as the discoverer calls them, is certainly not light, and "photographic" is evidently not the word to apply to the effects produced.

As it seems probable that this exhibition of energy is either a form of radiation or is intimately related to it, the term *radiography* might with propriety be applied to the process of producing the impressions.

The earlier reports from abroad indicated that the use of two induction coils was necessary, the secondary of one be connected with the primary of the other, and that a Crookes' "radiant matter" tube be connected with the secondary of the latter. As glass proved comparatively opaque it was deemed advisable to have a small aluminum window in the tube through which the rays could more easily pass. Later experiments, however, prove conclusively that these refinements are not needed, though without them a much longer exposure—perhaps an hour or more—is required. A single induction coil run by a few storage cells will excite an ordinary Crooke's tube quite enough to produce most of the results yet published. The induction coil in its ordinary form is familiar to every practitioner. A much larger coil is needed than is used for physiological stimulation, that which is being used in the experiments at the physical laboratory of the University of Pennsylvania being about 12 inches long and 4½ inches in diameter. It was constructed by Apps, of London, and possesses a primary resistance of about 0.3 ohm and a secondary resistance of about 3,200 ohms. The Crookes' tube represents as complete a vacuum as it is possible to obtain, and is supposed to have an interior pressure of about one-millionth of an atmosphere. The negative electrode from which the X-rays start is an aluminum disc about a half-inch in diameter. With the apparatus at present used by the writer an exposure of an hour or more was allowed. An ordinary photographic camera is used, having an aluminum shutter, which remains closed. The sensitive plates are entirely inclosed in the photo-holder, which is placed about five inches from the end of the Crookes' tube, in a horizontal position on the table. The subject to be *radiographed* is placed on the cover of the plate-holder. The plates are developed and fixed in the usual manner. Radiograms to any extent may be printed upon any sensitized paper.

ROENTGEN'S DISCOVERY—ITS APPLICATION IN MEDICINE.

HENRY W. CATTELL (*Med. News, 1896, lxviii, 169*) says that Roentgen's weird and wonderful discovery is destined to enrich medicine with possibly the most valuable diagnostic process which recent years have witnessed. Within a month from Roentgen's first announcement sufficient experiments have confirmed the value of his discovery and have pointed toward applications which, though yet unachieved, only await a development of details similar to that which converted Daguerre's slow, faint and uncertain methods into the instantaneous and brilliant photography of the present day.

In brief, Roentgen has found that the electrical current, passed through a Ruhmkorff coil and thence to a Crookes' vacuum tube, develops from the cathode an invisible form of energy, having the double property of penetrating certain ordinarily opaque substances and of affecting an ordinary photographic plate. Flesh, for instance, is translucent to these rays, and bone and metal, glass and graphite are comparatively impervious. On this difference in penetrability depends the effects which are permanently recorded by ordinary photographic plates. Perfect clearness of definition has not yet been attained. It will be convenient to coin the words "skiagraph" or "skotograph" to characterize pictures produced by the X-rays and to indicate at once their relationship to and their distinction from photographs.

The surgical imagination can pleasurably lose itself in devising endless applications of this wonderful process. If it becomes possible to drive these mysterious rays through the entire body as clearly as they now penetrate the hand, the realm of utility will be practically boundless. It is stated that stone in the kidney has already been determined, and the opacity of glass has led to the detection of small pieces adherent to bone after accident. The similar opacity of lead may render the probe useless in gunshot wounds, except in rare cases, as when the bullet is buried in the bone. A new means of distinguishing luxations from fractures is now added to the long list at our command. Obstetricians will readily perceive the immense value of ability to *see* the fetus in utero after ossification of its bones has occurred. The representation of deformed pelves in the living subject, of spondylolisthesis, of calcareous infiltration of various parts, such as arteries, and of exostosis—all this opens up a tempting and promising field for practical research.

The easy application of Roentgen's method of taking a picture on a sensitized plate renders its use at once possible in hospitals. The entire cost of such an apparatus need not exceed $50, and this amount will shortly be materially diminished. Doubtless the scientific and commercial ingenuity now being focused on this process will soon produce outfits at once simple, convenient and portable, and it is safe to say that most practitioners will then provide themselves with the means of seeing into the mysterious recesses of the body now accessible only by means of the knife.

METHODS EMPLOYED FOR THE PREVENTION OF THE SALE OF ADULTERATED MILK IN NEW YORK CITY.

EDWARD W. MARTIN (*Am. M.-S. Bull., 1896, ix, 101*) describes the methods employed by the Health Board to prevent the sale of adulterated milk and to insure to the consumer in general a good quality of pure milk. The magnitude of the work and the difficulties encountered, likewise, can hardly be appreciated by those unfamiliar with this kind of work.

The purpose of his brief remarks, therefore, was to outline in a general way, without going into every detail, the methods employed, and the difficulties which confront the health authorities and also to give some of the results that have been accomplished.

To enable the Health Board to successfully keep a close watch upon the sale of this important article of food and to detect and prevent its adulteration, the city has been divided into six districts corresponding with the judicial court districts.

The milk inspectors are constantly making their rounds through these districts, testing the milk, in every instance in which there is the slightest suspicion of adulteration or that everything is not just as it should be. The inspectors are required to make a note of the registration of the thermometer and of the lactometer. The number of the instrument used is also noted. This accomplished, the name of the dealer is secured and noted. The sample tested is then numbered, and the number of the police officer who accompanies the inspector in his rounds is also added to the memorandum for future identification if it is needed.

Two clean bottles are then filled with milk from the sample in question and sealed in the presence of the officer who accompanies the inspector. One of these bottles is placed in the hands of the department chemist of the Health Board, who furnishes the inspector with a receipt for the same. The second bottle, which was taken at the same time and sealed with equal care before the officer, is placed in the hands of the milk dealer, so that he can, if he so desires, have identically the same sample analyzed independently by any chemist that he may select for his own satisfaction.

This method of procedure is a protection to both the Health Board and to the dealer.

Further than this, a record of each dealer in milk throughout the city is accurately kept by the Health Board for ready reference.

THE PRESENT STATUS OF THE USE OF BACTERIAL CULTURES FOR THE DIAGNOSIS OF SUSPECTED DIPHTHERIA.

The making of a true diagnosis in every case of suspected diphtheria is at the present time not only of importance for the public health and for prognosis, but also as a guide to the use of the antitoxin in treatment. That we may judge fairly the exact value and meaning of a bacterial examination let us consider carefully the nature of the information which we derive from the examination of the bacteria on the coagulated blood-serum after a stay of twelve to fourteen hours in the incubator after its inoculation with the throat-secretion or exudate from a suspected case of diphtheria.

The facts upon which the use of cultures for diagnostic purposes is urged are as follows :

1. That in all cases of diphtheria the diphtheria-bacilli are present.

2. That those cases in which the diphtheria-bacilli are absent, not only do not themselves develop the characteristic lesions of diphtheria, but never communicate true diphtheria to others.

3. That many of the less characteristic cases of diphtheria and pseudo-diphtheria are so similar in appearance, symptoms and

duration that it is impossible to separate them by any other means than through cultures.

4. That the throats of many healthy persons who have been in contact with diphtheria or with articles infected with the bacilli become infected, and that although they may never develop diphtheria, yet their throat secretions are equally as dangerous as those of convalescent cases in whose throats the bacilli persist.

5. That the examination of cultures made upon solidified blood-serum under the proper conditions forms, with few exceptions, a reliable method of determining whether the diphtheria-bacilli are present or absent in the suspected throat.

The very nature of the bacterial examination of the growth on the coagulated blood-serum suggests that it must to a certain extent be incomplete.

To be of practical value to the physician the report must be received within twenty-four hours of the time of the making of the culture. This necessitates that the diphtheria-bacilli be differentiated from all other bacteria simply upon the examination of the stained cover-glass preparation from the original serum-tube. Any one who is familiar with bacteriology knows that this is impossible. Very fortunately, however, there are very rarely any other bacilli in the throat which both grow upon blood-serum and have the same staining and morphological characteristics as the diphtheria-bacilli.

This practically excludes the error of confusing the virulent diphtheria-bacilli with any other bacteria except two forms—the so-called pseudo-diphtheria-bacilli and the non-virulent bacilli.

The pseudo-diphtheria-bacilli present sufficient peculiarities to be separated from all but a few of the forms of the less characteristic diphtheria-bacilli. The virulent and non-virulent diphtheria-bacilli present, however, identical appearances and cultural peculiarities and can only be separated by animal inoculation.

These non-virulent bacilli are most abundant in those places where diphtheria has long been prevalent, and are, in fact, virulent bacilli which have lost their virulence.

These bacilli, like the pseudo-diphtheria bacilli, are, so far as we know, incapable of causing disease. They exist in about one per cent of the throats of persons living in great cities.

The practical difficulty which the non-virulent bacilli cause in the use of cultures for diagnostic purposes is apparent. If a culture from a suspected throat which presents no characteristic lesions contains bacilli looking like diphtheria bacilli, we cannot positively state whether they are virulent or not. The amount of probability in any case would depend upon the prevalence of the non-virulent forms in that city or neighborhood. Thus, to give an example:

If there develops in a throat in which non-virulent diphtheria bacilli exist a simple follicular tonsillitis, cultures would contain bacilli identical in growth with the virulent germs, and the report of such an examination would indicate that the case was one of mild diphtheria. The bacilli in this case, however, would still be non-virulent and have no connection with the tonsillitis. Another limitation in the value of cultures is that they show only in the roughest kind of a way how many bacilli are in the secretion of a suspected throat; and, on the other hand, they do not absolutely prove that the bacilli are entirely absent from the upper air passages because they were absent upon the limited portion of mucous membrane touched by the swab.

This is really of great importance in laryngeal diphtheria, for it has been frequently found that the bacilli were at times scant or absent in the pharynx while abundantly present in the larynx and trachea.

To sum up, therefore, we may say that if a culture made under proper conditions contains no bacilli similar to those of diphtheria, it may be concluded that the throat from which it was made contained no diphtheria bacilli, and that the disease was not diphtheria. If, however, the culture contains bacilli having the characteristics of the diphtheria bacilli, we can only conclude, unless we wait for animal inoculation, that the bacilli are in all probability virulent. The degree of this probability in any given case will depend greatly on the history of exposure and the lesions present.

In view of this doubt, wherever possible the virulence of the bacilli in the mildest cases should be tested, and where this is impossible health-departments may find it wise to arrange it so as to allow the physicians themselves to exercise a certain amount of responsibility in determining whether cases which have no characteristic symptoms, and yet show bacilli in their cultures, should be treated as diphtheria or not. Undoubtedly, if this were done, a certain number of mild cases of diphtheria would be freed from strict isolation and some harm result ; but, on the other hand, physicians would more freely seek the aid of cultures in these light cases, and also co-operate more heartily with the health-authorities. Thus in the end many more of the lighter cases of diphtheria would be partially isolated and receive, when necessary, injections of antitoxin for treatment or immunization.—*Editorial, W. H. Park, Med. News, 1896, lxviii, 107.*

DIPHTHERIA ANTITOXIN AS A CULTURE MEDIUM FOR THE DIPHTHERIA BACILLUS.

Some interesting correspondence has been published in the *British Medical Journal* relative to diphtheria antitoxin as a culture medium for the diphtheria bacillus. We (*Times, Reg., 1896, xxxi, 95*) are not surprised at the result of the investigations, proving that serum of any sort will prove an excellent culture medium. It would not have been along the line of sound reasoning to have had it prove otherwise.

The letters in question refer to this fact, having been brought out by Drs. Wright and Semple, of the Netley Army Medical School, and are as follows:

"In the *British Medical Journal* of October 12 I was much exercised in my mind to learn that Drs. Wright and Semple, of the Netley Army Medical School, suggest the use of diphtheria antitoxin as a culture medium for the diphtheria bacillus. I have not had an opportunity of verifying their experiment; but if it is a reliable one I wish to point out that it appears to upset my view of the value of the antitoxin as an antidote to diphtheria poisoning. I have always understood, although I may be open to correction, that the antitoxin contained a something—possibly a ferment—which, when introduced into the body of a patient suffering from the disease, effectually prevented the subsequent growth of the Klebs-Loeffler bacillus. If this is not so, what is the use of the injection? I am, etc., W. A. Hollis."

"In reply to the letter of Dr. W. A. Hollis, in the *British Medical Journal* of November 9, respecting the employment of diphtheria antitoxin serum as a medium for cultivating the diphtheria bacillus, I may say that I have made trial of Drs. Wright and Semple's method with satisfactory results. Three inoculations were made as directed from membrane expelled from the trachea of a severe case of diphtheria in a boy, aged 5 years, which proved fatal on the fifth day, after tracheotomy and two antitoxin injections. At the end of twenty-four hours colonies had developed at the sites of inoculation, and these showed, on microscopical examination, crowds of short and long bacilli, with cocci. One little detail may be added to Drs. Wright and Semple's directions: the bottle can be kept at practically body heat during the daytime by carrying it beneath the waistcoat as they describe, but what is to be done at night? I placed the bottle in my axilla, secured by a string round the neck.

"I take it that the antitoxic serum serves in this capacity simply as a culture medium, any special properties which it possesses being destroyed by the heat applied to produce coagulation. I am, etc., H. W. Webber."

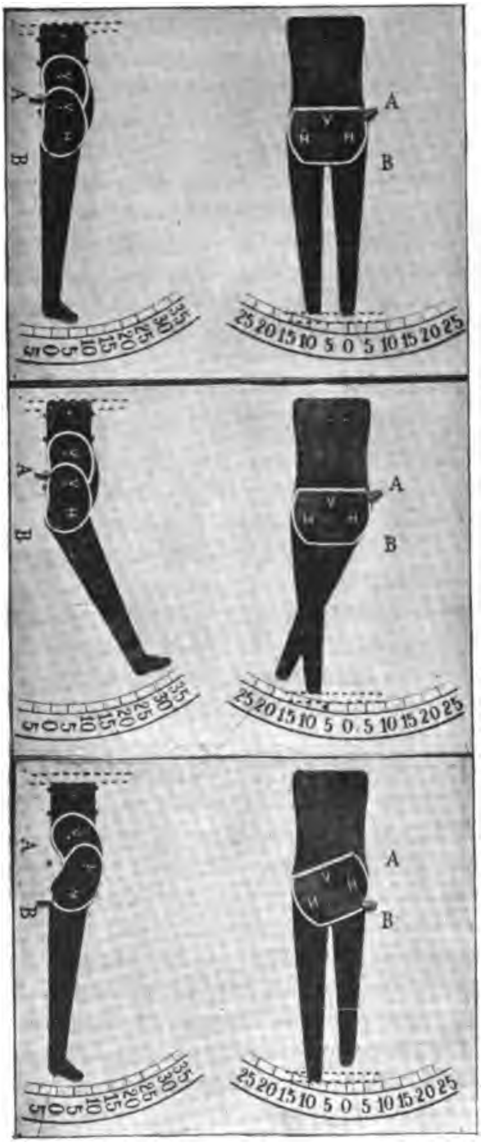
"Your correspondent, W. A. Hollis, in reality proposes to Dr. Semple and myself the following dilemma: either (1) the injections of anti-diphtheritic serum may be useless, and, if so, the antitoxic serum may be a good cultivation material, for injections of anti-diphtheritic serum are useful, and then it must follow on a priori principles that the diphtheria bacillus will not grow on antitoxic serum.

'The only way of dealing with such an argument is to show that there is another possible alternative which we have no a priori reasons for rejecting. The alternative in question is that the injections of antitoxic serum may be useful, even though the antitoxic serum possesses no bactericidal power whatever. Now, since this is a proposition which probably every bacteriologist is concerned to maintain, it may be well to show that its acceptance does not involve us in any contradictions. The matter will probably become perfectly clear to the reader if he will consider and compare the two following series of propositions: (1) Alcohol is produced by the yeast plant. The absorption of that alcohol into the system constitutes an 'alcohol intoxication.' Certain drugs, such as opium or bromide of potassium, do to some extent neutralize the effects of that 'alcohol intoxication.' A sugar solution constitutes an excellent culture medium for the yeast plant. (2) Diphtheria toxin is produced by the diphtheritic bacillus. Absorption of diphtheria toxin into the system constitutes the 'diphtheria intoxication.' Diphtheria antitoxins neutralize the effects of that 'diphtheria intoxication.' Serum is a good cultivation medium for the diphtheria bacillus.

"Now, we are evidently no more entitled to infer a priori from the one series of facts that the presence of 'antitoxins' in the serum would render it a bad culture medium for the diphtheria bacillus than we are entitled to infer a priori from the other series of facts, that the presence of opium or bromide of potassium in a sugar solution would render that sugar solution a bad culture medium for the yeast plant. In both cases the question is simply a question for experiment. I am, etc., A. E. Wright."

MECHANISM TO ILLUSTRATE THE DEFORMITIES OF HIP DISEASE.

Dr. A. B. Judson exhibited the mechanism shown in the cut to illustrate the deformities of hip disease. The models are constructed to imitate the motions of the hip and the vertebral column in health and as affected by anchylosis. The images are cut out of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pasteboard and are pivoted to the background at V in the full figure and at H in the profile. The joints are made of loose eyelets. The limb is first adducted and then anchylosis is imitated by applying the spring-clip (a scarf-retainer), which binds together the piece representing the pelvis and that representing the femur. When the limb is now made parallel with the axis of the figure apparent shortening is produced. In a similar manner may be illustrated the production of apparent lengthening by abduction. Referring now to the profile the limb is first flexed and anchylosis simulated by applying the clip to the pieces representing the pelvis and the femur. When the limb is then brought down to the table the lumbar region of the spine is arched. The dotted lines prove that adduction as shown in the full figure increases the stature, while flexion as shown in the profile decreases it.

NEPHRECTOMY FOR DISPLACED KIDNEY AND HYDRONEPHROSIS.

Dr. McBurney presented before the New York Surgical Society (*Annals Surg., 1896, xxiii, 183*) a boy, fourteen years old, who was admitted to the Roosevelt Hospital on September 8, 1894. During the preceding year he had had a number of attacks (twelve or more) of nausea, prostration, and hypogastric pain. Each attack lasted three or four days, during which time an intra-abdominal hypogastric tumor was present. When the tumor disappeared all symptoms were relieved at once. On admission to the hospital no tumor existed, but slight tenderness on pressure over the lower abdomen was noted.

On September 11, a tumor, firm and round, about three inches in diameter, occupying the median line just below the umbilicus, was noted. It was dull on percussion. The next day Dr. Hartley operated, making a long median incision and uncovering a post-peritoneal tumor which rose to the anterior abdominal wall. The tumor was clearly made out to be cystic, but its exact origin could not at that time be made out, and as the surrounding wall was exceedingly vascular, it was incised, and the edges of the incision were sewed to the edges of the abdominal wound. A pint of clear yellow fluid was evacuated. No communication between the interior of the cyst and any viscus could be demonstrated. The fluid was subsequently shown to be urine. The patient made a good recovery, the opening remaining, however, and continuously discharged urine.

Attempts to show the connection between the cyst and the bladder were made with methyl-blue, but without success. To determine the exact nature of the cyst and to examine the surrounding parts, Dr. McBurney made a free incision in the left linea semilunaris into the peritoneal cavity. Through this incision the fingers could determine the outline of a kidney lying posterior to the cyst-wall and intimately connected with it. In the same manner the absence of the left kidney from its normal position was ascertained. The conclusion was that he had to deal with a displaced cystic kidney, and that the urinary fistula and cyst could be cured only by nephrectomy. He did not think it wise to do this operation at that time, and so closed the lateral wound, which healed primarily.

On June 5, 1895, operation was begun with a view of removing the cyst-wall and kidney together. The cyst was first washed out and then packed with gauze. The fistulous opening was closed by suture and the belly-wall resterilized. A median incision from the umbilicus downward and encircling the fistulous opening was made and the peritoneal cavity opened. Numerous firm adhesions were torn or tied. After some dissection the renal artery and vein were found entering the tumor at its posterior edge behind the cyst. These were tied and cut. The cyst could now be clearly made out to be the dilated pelvis of the kidney, the mass of which hung deeply into the pelvis of the patient. Crossing in *front* of the kidney itself, between it and the anterior abdominal wall, was the short ureter. Doubtless this position of the ureter accounted for its occasional obstruction and for the distention of the pelvis of the kidney. Division, after ligature, of the ureter followed, and it was then not difficult to remove the kidney, cyst, and fistulous tract in one mass. The abdominal wound was partly closed by suture and partly packed and drained.

No interruption to recovery followed, and the patient has remained perfectly well. Excluding a congenital condition, as symptoms did not appear until the eleventh year, the condition existing in this boy can only be accounted for on the supposition that the left kidney was displaced downward in such a manner that its lower end passed *behind* the ureter. When operated upon, the body of the kidney lay across and within the pelvis of the patient. The renal vessels entered the hilum just opposite the last lumbar vertebra, and the ureter passed from the distended pelvis of the kidney across the anterior face of it to the bladder.

Dr. Kammerer said that from the nature of the attacks he should assume Dr. McBurney's case to have been one of intermittent hydronephrosis. It certainly seemed to prove that a movable kidney was most frequently the primary cause of retention in the pelvis, and that valve-formation at the junction of the ureter and pelvis of the kidney and twisting of the ureter or kinking were probably secondary to displacement of the organ. He had shown at a previous meeting of the Society a specimen of hydronephrotic kidney, which he had obtained from a young woman of twenty, who had also begun to suffer from such attacks as Dr. McBurney described, in her sixteenth year. They had increased in frequency, and were accompanied, when the patient was seen by the speaker, by the formation of a tumor the size of a child's head, which was situated mainly in the false pelvis, but could be discovered by bimanual palpation from the lumbar region also. It gradually disappeared after the attacks. The tumor was removed by a lumbar incision, and was found to be the kidney, pelvis and kidney proper being distended into one large sac. There was very little kidney substance left.

TUBERCULOSIS OF THE TESTICLE IN EARLIEST INFANCY.

Comby (*La Medicine Infantile, 1895, xii, 678*) presents two cases; in one, tuberculosis of the left epididymis began in a 14 months old child, which soon after developed a left cervical adenitis and a white swelling of the left ankle. The testicle when examined was hard and nodular, the swelling was indolent, and the skin was not adherent. Under proper hygiene all these affections practically disappeared in one year, but after about six months of comparative health a tubercular meningitis developed which resulted fatally. In the second case both testicles became suddenly affected in a rachitic boy four years old with a tubercular family history. Examination showed that there was a double epididymitis, probably old, with a subacute orchitis of recent origin. The scrotum was red and edematous and there was an effusion into the tunica vaginalis. The subsequent history was unknown. Note is also made of Jullien's 20 cases; of these, 6 were less than a year old; 6 from one to two years of age, and 8 from two to three years. The left testicle was oftener affected than the right.

Tuberculosis from Milk.—Two butter-makers and the son of Allen Devereaux, whose tuberculous herd of dairy cows was recently destroyed, have contracted the disease. As all were large partakers of the diseased milk, there can be little doubt as to the source as well as the method of their infection.—*Med. News, 1896, lxviii, 158.*

PEDIATRICS

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Original Articles.

NOTES ON SKIN DISEASES IN CHILDREN.

By LESLIE PHILLIPS, M. D.,
Surgeon to the Birmingham Skin and Lock Hospital, England.

AN effort has been made to render the following notes, based upon observations among the out-patients of a special clinique, as brief as it is possible without sacrificing clearness, and this has been done in the belief that the general usefulness of such records is not as a rule diminished by such a proceeding.

Eczema Capitis in Children Leading to Alopecia.—In children eczema of the scalp is not unfrequently seen to cause marked falling of the hair. The local baldness is never complete as in alopecia areata, but consists generally of a severe *thinning* of the hair. In some cases, however, the suspicion of tinea tonsurans is strongly suggested, and then some care in observation is needful to differentiate the condition. The occurrence of cases of eczema is not very uncommon in which a considerable degree of temporary baldness is seen, and as the loss of hair is confined to the areas actually affected with the eczema, the patches are nearly always irregular in shape, never so rounded as in tinea or alopecia areata, and always shading off rather than abruptly margined. The following ointment usually suffices to cure the condition. It should be applied after the thorough removal of crusts:

℞ Ung. Zinci Oxidi.
Ung. Hyd. Ox. Rub. āā ℥ ii

Eczema Seborrhoica Capitis in a Child.—The following case is an example of a variety of eczema less frequently met with. Eczema of the head in children is nearly always vesicular and attended with very considerable crust formation, the crusts being more or less friable and easily detached. The present example constitutes, however, a distinct type, and its consideration and the records of its treatment are therefore of value. The lesions resemble the intensely hard "caked" crust sometimes seen in eczema affecting the eyebrows of adults. A. W., a girl five years old, presented yellow, dry, flat, very hard patches of crust distributed over and closely adherent to the scalp. The disease was easily cured by the following treatment. The hair was cut and the hard crusts removed by poultices, after which the following ointment was applied:

℞ Ung. Zinci. Oxidi. ℥ i
Ung. Sulphuris. ʒ ii
Acidi Salicyl. gr. v
Adepis. ℥ i
M. ft. Ung.

Treatment of Tinea Tonsurans.—I venture to so word the title of this note, although it is written less with a desire to speak of any new curative means than to point out certain *principles* which I have found useful in practice. Prescriptions for sovereign remedies are more than sufficiently numerous. In theory they seem admirably adapted to secure the end for which they are designed, but in practice, and in the hands of others, they by no means justify the anticipations of their originators. The considerations which guide me in routine prescribing for ringworm are based upon the following practical observations: (1) That, especially in recent cases, remedies may do harm by being too strong or irritating, and (2) that liquid embrocations or applications are generally much more useful than ointments. With regard to the first point, I have convinced myself that the sound parts of a scalp when irritated by strong applications much more easily become a prey to the invasion of the tricophyton than when left alone or soothed, and hence that irritant applications not only often fail to cure the affected area but actually cause the extension of the disease. A commonly used routine remedy is Ung. Carbolici Co., having the following formula:

℞ Ung. Sulphuris. ℥ j
Acidi Carbolici. ʒ ij
Misce bene et adde.
Ung. Hyd. Nit. ʒ ij
Misce fiat unguentum.

I have long since ceased to use this, for it was a frequent observation to find that a fresh patch had appeared in spite of the fact that the scalp was being vigorously treated with it.

With regard to the second point, I obtain much more satisfactory results since I have discarded ointments in favor of liquid applications. Indeed I now seldom use an ointment for this disease, the only cases in which I do being those of diffused ringworm, which present the appearance of an asbestos-like mycelioid mass on the surface of the scalp. Here a mild ointment containing gr. xv of carbolic acid with a similar quantity of precipitated sulphur to the ounce has a beneficial cleansing influence. Similarly a weak chrysarobin ointment (gr. x to the ounce) has its use. The rule of practice, however, remains.

I am accustomed to regard alcohol as a good basis of treatment, it being at the same time an admirable and cleanly vehicle for the conveyance of other parasiticidal remedies, such as carbolic acid, thymol or lysol. The following application I have found useful:

℞	Spt. Vini. Rect.	℥ ii
	Camphoræ.	ʒ i
	Hydrargyri Perchloridi.	gr. ii ad gr. vi

Misce fiat Embrocatio.

The addition of glycerine to spirituous applications is often of distinct advantage.

Lactic Acid in Lupus.—In many cases of tubercular lupus where much chronic inflammatory infiltration exists, with or without ulceration, the application of 75 per cent. lactic acid as a caustic is often beneficial, but it will be found that that smooth-surfaced stage of lupus in which the apple jelly-like nodules are superficial, closely approximated, and visible, is entirely unaffected by this acid, even when perseveringly used.

Resorcin in Xeroderma.—In my experience, resorcin has in xeroderma a much greater tendency to vesiculate or to form bullæ than it has when applied to the healthy skin, and much weaker applications suffice to do so. I have seen most extensive vesiculation produced by a 4 per cent. ointment in this disease, while great benefit resulted from the application of a 2 per cent. strength. This example strengthens the plea for dilute strengths of our topical applications in dermato-therapeutics.

Urticaria Papulosa: implication of the labial and conjunctival mucous membranes.—A male child, nine months old, was affected with urticaria papulosa of five months' duration. The rash was very evanescent, it would "come out and go away again in half an hour." The lips were often swollen from the occurrence of the eruption on their mucous surface, and the eyelids, too, were frequently similarly œdematous.

Alopecia Areata in a Sister and Tinea Tonsurans in a Brother, Simultaneously.—The following cases are of interest as bearing on the growing belief in the relation of alopecia areata to tinea tonsurans:

Nellie W., aged seven years, attended my clinique for alopecia areata and remained under my care from January till October, when the cure was complete. At the same time her brother Willie was a patient with tinea tonsurans. Nellie's alopecia appeared some time before Willie's head become affected with ringworm.

Alopecia Areata with Erythematous Patches on the Forearm.—Albert G. has multiple circles of alopecia areata of the scalp and there are some small, roundish, irregular-shaped plaques on the flexor aspect of the forearm. These are reddish in color and look like seborrhea or tinea circinata. A liniment of turpentine and corrosive sublimate quickly cured the forearm lesions.

Tinea Circinata Appearing in a Case of Alopecia Areata.—*Chas. L.* had several patches of alopecia areata as well as the general thinning of the hair or diffuse alopecia, often found coexisting with alopecia areata. There were no broken hairs. Seven weeks after his first attendance, and while the disease was being treated, there appeared a round patch the size of a penny piece of tinea circinata on the nape of the neck, and a fortnight later another similar patch on the side of the neck.

Scabies and Impetigo Contagiosa.—Scabies and impetigo contagiosa are commonly associated, and the impetigo may be conveyed to a part of the body quite unaffected with scabies, such as the face. A child, 8 years old, afforded an instance of several of the separate characters of the disorder. In the interdigital spaces of the right hand each burrow had apparently excited a pustule, while the corresponding part of the other hand presented only redness from scratching, no cuniculus being seen. A few spots of impetigo contagiosa, secondary and conveyed, existed about the mouth. The following is a very convenient and efficient formula for scabies and its attendant pustulation:

℞ Ung. Sulphuris. ℥ i
Zinci. Oxidi. ℥ j
Vaselin. ℥ j
Resorcin. ℈ i
M. ft. Ung.

An Instance of the Difficulty which may Attend the Diagnosis of Scabies.—Two sisters were brought to me; the one, Gertrude, clearly had interdigital scabies, and the same disease with much eczema widely distributed on the body. There is, I am told, another sister, Florrie, who was first affected, and she, as well as Gertrude and Louisa, whose case I am about to briefly mention, all slept on one occasion at the beginning of the disorder in the same bed. Now Louisa presents a condition, the educational interest of which lies in the fact that, had she come under observation without such a clear and helpful history, she would, I venture to assert, never have been suspected of suffering from scabies even by the most astute specialist. The only lesions she presents are: (a) two dry-scabbed, isolated patches of ecthyma (impetigo contagiosa) about one knee; and (b) on the anterior fold of the right axilla a very innocent looking patch of erythemato-squamous eczema. The history caused me to look with very particular attention on this patch of eczema, which, she said, was very itchy, as were also the patches of ecthyma, on the leg.

In the centre of the squamous patch was one inconspicuous pustule about the size of a millet seed, and near it, when seen by a lens, were two unmistakable burrows. These latter would not have been detected in a patch of squamous eczema unless looked for with the preconception that they might be found; but that they were present there was no doubt.

It is a useful rule to put the question to one's self in all cases of impetigo contagiosa, "Is not the impetigo secondary?"

Its association when on the limbs with scabies, and when on the head and neck with pediculosis, are so frequent that I invariably find myself clearing up the point before labelling the case simply "impetigo contagiosa." The fact that the eczematous patch in this case was unilateral is, I think, a point of some slight importance. Eczema of this patchy kind is frequently strikingly symmetrical, although not necessarily so; and again scabies, like some other parasitic dermatoses, is generally very symmetrically placed. Still this particular instance impressed me that its one-sidedness was not accidental, and not without significance.

The Polymorphism of Scabies.—In an infant nine months old, the feet and legs of which were affected with scabies, the lesions were almost wholly lichenous, one or two pustules only existing on the dorsum of the foot.

Eczema Squamosum Around the Mouth with Eczema Vesiculosum of the Flexures of the Elbows in a Child

Nine Years Old.—The use of the following ointment resulted in very rapid cure:

℞ Ung. Simplicis
Ung. Glycerini Plumbi Subacet āā ℥ i
M.

Causes (!) of Pediculosis Capitis.—In a case of impetigo contagiosa in a child, due to pediculi capitis, the mother anxiously volunteered the information: "I must tell you, sir, she belongs to a very gouty family." We find in practice that, when the heads of children are infected with pediculi, the friends or parents are particularly ready with such-like observations. Another told me that a month previously the child had run a nail into its scalp. It is rather difficult to understand the mental attitude of a person who wishes it to appear that she believes such an occurrence would satisfactorily account for the presence of a moving mass of pediculi.

Coloring Ointments to Match the Skin.—The ordinary colors used by decorators and sold at oil and color shops may be used to effectually and cheaply give a skin-tone color to ointments and pastes. The following is a useful stock color:

"Light red."
"Yellow ochre," of each 1 part.
"White," 6 parts.

Mix. Twelve grains of this powder mixed with one ounce of zinc ointment, or other white ointment, give to it a good skin color.

A Phase of Urticaria Papulosa, in which the Disease is most Likely to be Confounded with Scabies.—Attention may be directed to a particular phase of urticaria papulosa, in which, without doubt, there is some general resemblance of the disease to certain manifestations of scabies. In inspecting carefully these children, as they are brought to the out-patient room week after week by more or less persevering though apt-to-be-discouraged mothers, a proportion of them, and not a small proportion, I think, will be found to present vesicular lesions especially, and sometimes exclusively, affecting the hands and feet. The vesicles are somewhat large, very distinctly visible, discrete, but with an envelope which is much tougher than that of a vesicle of eczema. The latter easily ruptures on pressure, but the vesicles of urticaria papulosa, on the contrary, resist considerable finger pressure, although most of them are destined to rupture before they disappear. These lesions resemble the parasitic scabies in their intense itchiness, which in both diseases is worse at night. The vesicles are generally almost entirely free from surrounding inflammation ; in fact, they are the last visible trace of the gradually disappearing papule of the urticaria. The most attentive examination reveals nothing analogous to the burrow of scabies. Some emphasis has been given to the supposed diagnostic value in scabies of the linear arrangement of a group of lesions, but in a case of urticaria papulosa under my care there were, on one occasion, four discrete vesicles situated on the dorsum of the foot arranged in one straight line and with intervals of half an inch between them. A mistake in diagnosis is not likely to arise if the practitioner has the opportunity of keeping any particular case under observation for a time, but even in cases presented for the first time, and presenting only such vesicles as I have described, one or two of which have perhaps been rubbed or scratched beyond recognition, there are two diagnostic signs beyond those which I have mentioned, on which I am in the habit of placing reliance. These are,

(1) The evolution of the lesion, and
(2) The history of the case.

If the mother is carefully questioned, there will generally be no difficulty in eliciting the fact that the vesicle began two or three days before in an ordinary urticarial papule such as occurs on the trunk of the child, and that the redness gradually subsided, leaving the present vesicle. With regard to the second point, these cases are often entirely free from any manifestation of their disease for days together, when, from some reason, a relapse occurs, and suddenly and simultaneously there appears distributed over limbs, face and trunk, and it may be even scalp, soles and palms, a more or less thick crop of lesions running through the well-known stages of their evolution. If, then, there can be secured a clear story of entire freedom from trouble for perhaps a week, followed by a relapsing attack, there is very strong evidence indeed against scabies, in spite of any superficial similarity of the general aspects of the case with that disease.

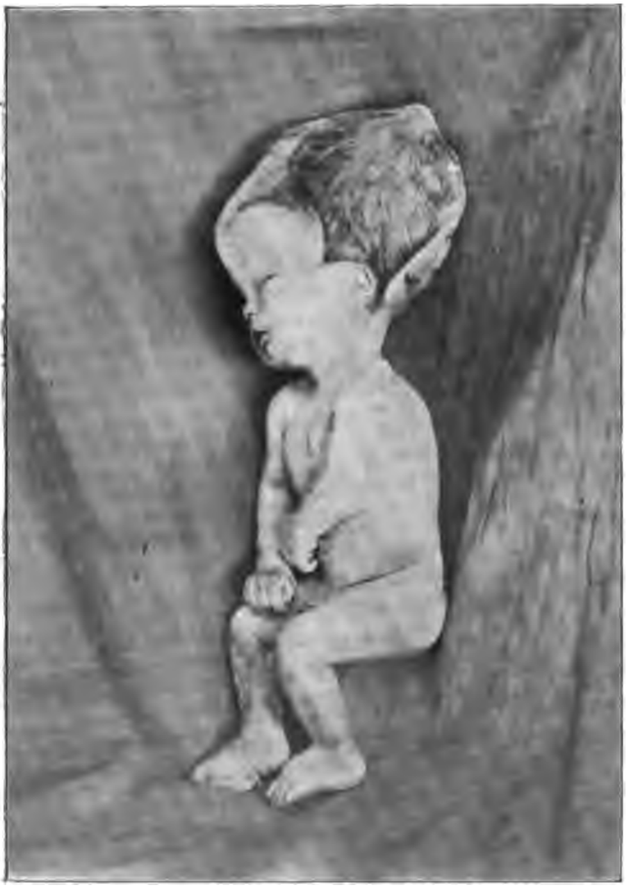
Infant Mortality in Paris.—More than 155,000 children under one year die annually in Paris, the greater number of them owing to neglect on the part of their mothers. The proportion of illegitimate births, which at the beginning of the century was four or five per cent of all births; is now nearly nine per cent for France and twenty-eight per cent for Paris. Among the children of Paris wet nurses the average mortality is seventy-seven per cent.—*Med. Rec., 1896, xlix, 285.*

A CASE OF CONGENITAL HYDROCEPHALUS.

By P. D. Winship, M. D., M. D.
Surgeon G. N. R. R., Park Rapids, Minn.

CASES of congenital hydrocephalus are so rare that I deem this one of sufficient interest to report.

On the 18th of February I was called by a midwife to a case that was not progressing favorably. I found a breech presentation. The feet and the body to the umbilicus was protruding.



Congenital Hydrocephalus.

The attendant, who was an old and experienced accoucheuse, told me it had been in that condition for about half an hour and that all pains had ceased.

A careful examination showed that the child was dead and the uterus tightly constricted about its neck. The neck was held in a vicelike grip and it was impossible to move it. I recognized the hour-glass contraction and also a mass within the uterus. I was very tired, having attended two other labor cases during the ten preceding hours, and I called to my assistance Dr. C. W. Cutler. We immediately placed the woman under chloroform and began dilatation of the uterus with the wide blades of the forceps.

By firm traction on the feet we held all we gained and soon discovered we had a hydrocephalic head. The cranium was immediately punctured and relieved of the accumulated fluid, when traction soon delivered the child.

Examination after delivery verified our diagnosis. We found the following: A well nourished, well developed male fetus, weighing 12 pounds; height, 30 inches; circumference of head, after it was emptied, 32 inches; parietal bone thick and well developed; frontal bones thick and well developed; occipital bones soft and undeveloped.

The mother was a primipara of medium size and quite healthy. There was no history of syphilis or tuberculosis. Of Scotch descent, the father had an equally good record. The pregnancy was uneventful, the mother suffering no inconvenience during this period.

The child was delivered without accident to mother, with only a slight tear to fourchette. Fortunately the pains ceased at the time of delivery of the feet, thus lessening the danger of rupture of the uterus.

The case is unique both from the congenital hydrocephalus of enormous size and by being complicated with hour-glass contraction. In a practice of 30 years this is my first case of congenital hydrocephalus.

Herpes Zoster.—The prognosis of zoster is good, save when the forehead and eyeball are affected. Suppurative panophthalmitis and destruction of the globe sometimes occur in spite of all our efforts to save the organ. Obstinate neuralgias that may plague the patient for years may be left behind; but recovery is perfect, as a rule, when the disease ends.—*Gottheil, Med. Rec., 1896, xlix, 286.*

EXAMINATION OF CHILDREN IN MEDICO-LEGAL CASES.

By JUSTIN HEROLD, A. M., M. D.
New York.

YOUNG children, as a rule, have very hazy ideas as to right and wrong, and nothing is gained by getting their confidence, for they are only too eager and too willing to agree with the physician who may be examining them. He is frequently led astray by erroneous conclusions from ambiguous statements, which, when brought out in the witness-chair, are rent asunder by the opposing counsel. In examining a child preparatory for, or previous to testifying, one visit is never sufficient; you must enter upon terms of friendship with the child, and, above all, remember that the mere presence of any one interested will cause the child to make contradictory statements in regard to the facts of the case.

Habits, traits of character and susceptibilities must be included in your notes. If you can induce your subject to tell you the facts from beginning to end you are certain to receive a straight story. In this manner the salient points valuable to the examiner for discussion upon the witness-stand can be ascertained in a short time. A great amount of questioning is unnecessary unless it be to make more positive the essential features of the case.

By all means take notes, if not of the whole case, at least of the points for presentation to court and jury. As members of an honorable profession you cannot afford to perjure yourselves; testify to facts only, answer questions without giving lengthy explanations, and remember that if you are in the right, despite the pushing practices of an opposing lawyer, you can always appeal to the "Court."

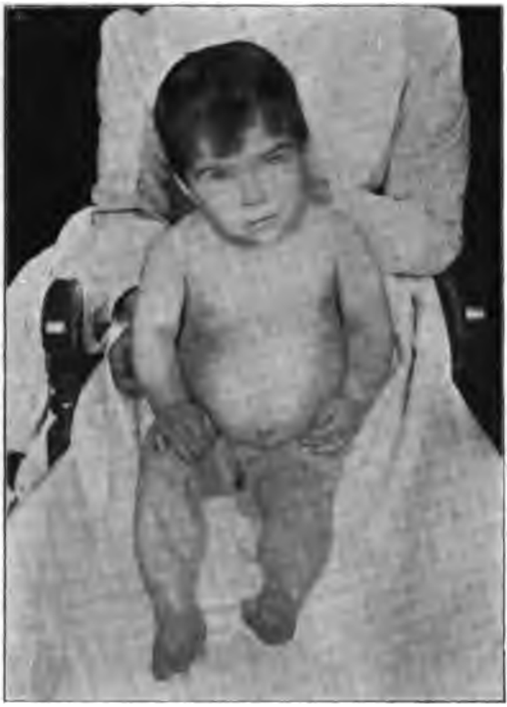
Testimony before a jury, interspersed with statements that are inharmonious, is harmful. Take time in answering, and if the question is not quite clear, have it repeated. Base your testimony upon what you know from physical and oral examinations, not from what you think. Testify plainly, using simple terms without any flourish or unnecessary language. Have your facts well digested and deliver them calmly and logically.

A CRETIN TREATED BY THYROID FEEDING.

By James Taylor, M. A., M. D.

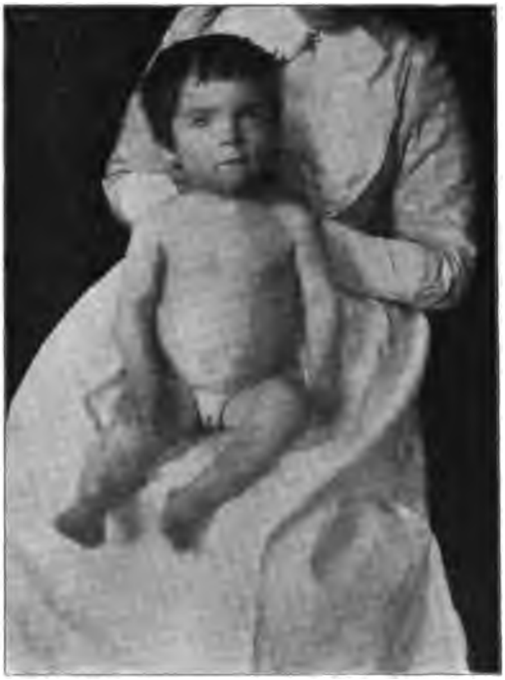
Assistant Physician, National Hospital for the Paralyzed and Epileptic, Queen Square; Physician to the North Eastern Hospital for Children.

IT seems almost superfluous to adduce further proof of the efficacy of Thyroid feeding in Cretinism. But the isolated examples even of the success of this treatment are so striking both in regard to appearance and disposition that they must always excite interest. The instances in which the medication has been applied at an age early enough to prevent the interference with development which cretinism implies are unfortunately extremely rare, but, on the other hand, those in which remarkable modification has taken place are fortunately common. I have thought that a brief note on the case illustrated by the accompanying photographs might be interesting, because not only was the change in the child's appearance striking, but this was accompanied by changes both



physical and psychical, which were both unmistakable and gratifying.

C. S., aet. 4½, was seen by me in the out-patient room at the National Hospital for the Paralyzed and Epileptic, Queen Square, in July, 1893. Dr. Hughlings Jackson was kind enough to allow me to have the patient under my care in the hospital, where she was admitted on the same day on which I first saw her. On admission the patient was, as the first photograph shows, a typical cretin, with the loose, pendulous, waxy looking skin, the scanty dry hair, and prominent umbilicus usually associated with this condition. The child had no teeth, had never had any, and was unable to talk, and the only attempt at phonation was a hoarse croak. She was at once put on Thyroid treatment, the gland being administered in the form of powders manufactured by Mr. Allen Kilburn. Of these powders one is equivalent to one-sixth of a sheep's gland. At first one-half powder was given, later this was reduced to one-quarter, and in two months the result was very striking. There



was a rapid eruption of teeth, the hair became abundant and much less dry, and the child's appearance underwent a remarkable change, as the photograph shows. A somewhat restless destructiveness had replaced the apathy, but no attempt at speech was made. Progress continued after this uninterruptedly, although not of such a rapid character. The destructiveness diminished greatly, she began to walk, and her legs gradually gained in strength. Now, after more than three years, she is able to toddle about fairly well, her appearance is in no way peculiar, her intelligence seems fair, but she can only use a few familiar words. She still takes the Thyroid powders, and her health generally is excellent. Whether the future will show a still greater advance in physical and mental development, is doubtful, but the indications are such as to make it very desirable to continue the treatment.

Notes on an Epidemic of Enteric Fever among Children.--BOND (*Va. Med. Monthly, 1896, xxii, 1027*) reviews an epidemic of twelve cases of enteric fever, which occurred in a home for destitute children, and in closing drew the following inferences :

That children often bear high temperatures well in this disease.

That full baths should be very carefully and judiciously applied, if at all.

That the disease in children under five years of age may easily be mistaken for other digestive disorders or for bronchitis.

That albuminuria coming on during the fever does not necessarily lessen the chances of recovery.

That gangrene of the mouth, if superficial, may, in some cases, be cured by permanganate of potassium washes, without caustics.

That digestion ought throughout the disease to be aided by pepsin or pepsin and acid.

That great care ought to be used for the prevention of accumulations of ill-digested, foul and irritating food residues in the bowels at any time from the inception of the disease far into convalescence. At the very beginning the bowels should be *thoroughly* cleaned out. Later, if there is not depressing diarrhea, occasional one-tenth grain doses of calomel should be used. If there is constipation, small doses of epsom salts should be regularly administered as described.

DIAGNOSIS OF ACQUIRED SYPHILIS IN INFANTS AND YOUNG CHILDREN.

By GEORGE T. ELLIOT, M. D.

Professor of Dermatology in the New York Post-Graduate Medical School, etc., etc.

THE receptivity of infants and young children to the syphilitic poison is as great as that of adults, and they are as readily infected. With them, however, the source of infection not being sexual intercourse, the site of inoculation is most usually extragenital, particularly about the mouth, though it may be upon the genitals or on any other portion of the body. After the disease has been communicated, there is in children as in adults a period of incubation of variable duration—two to six weeks—and then the development at the site of inoculation of an initial lesion—the chancre. This may present all the characteristics of the same lesion in adults, having an indurated base and being either eroded or ulcerated, but more often in infants it is represented by a papule. Following the appearance of the chancre, there is a second period of incubation, during which there are no further symptoms, except the very important enlargement of the lymphatic glands nearest the initial lesion and the steady implication of the other glands, that is, a polyadenitis developes. At the end of four to six weeks, perhaps a little longer, a slight deterioration of the general health is noticed, the infant or child becomes restless, peevish and irritable, a moderate elevation of temperature may be noted; if the child is old enough, headache and general pains are complained of, and after a few days a roseola appears over the body, but especially on the trunk. This eruption may be very slight or severe, remain a few weeks and disappear, or become merged into a papular eruption. When it disappears, a period of quiescence of variable duration may follow and be broken by outbreaks of papules, or of papulo-pustular lesions, with the development of mucous patches in the mouth, of condylomata lata about the anus, vulva, or on surfaces constantly moist and in contact with each other. Iritis may occur, the long bones become affected, and in other words those one and other manifold and polymorphous symptoms pertaining so peculiarly to syphilis may arise and follow each other. After the development of these evidences of active syphilis, there may be an entire cessation of all phenomena for a greater or lesser period of time, or there may be an immediate passage into the late or tertiary stage, with its grave cutaneous and other manifestations, so prone to be of a destructive nature and to cause irremediable or at best disfiguring and lamentable results to the tissues involved, and so prone, when early and energetic treatment has not been carried out, to expose the patient to relapse after relapse and to all of the dangers and vicissitudes of tertiarism. From the picture which has been drawn, it can be seen that syphilis, when acquired by infants and children, differs in no particular in its course, general symptomatology and effects, from the same disease in adults. It can only be said that in the former its manifestations are more intense and extensive, and its effects upon the organism in general more severe, greater care being, therefore, necessary to ward off the material dangers due to its presence.

There are, however, occasions presenting themselves in practice, when the important question arises as to whether an infant bearing the insignia of the disease is a subject of acquired or of hereditary syphilis. There may be no history obtainable as far as the parents are concerned, no history of a primary lesion, and even this having been present, it may have disappeared ; so that there is no clue to the origin of the existing symptoms. Under these circumstances, the differential diagnosis between the acquired and the hereditary form of syphilis is not always easy, but in the majority of cases certain features aid greatly in arriving at the proper conclusion. If the infant has acquired its syphilis after birth, a chancre may or may not be present, but polyadenitis will be found, and the cutaneous eruptions appear only after the third month of life. The symptoms and course are, moreover, only those pertaining to the secondary stage of syphilis, and the general nutrition of the infant suffers to only a minor degree.

On the other hand, hereditary syphilis, having such a grave effect upon nutrition, will impress upon the infant a marasmic appearance, polyadenitis will be absent, the cutaneous eruptions begin much earlier, often a few days after birth, commonly about the third week, sometimes later, but yet within the third month of life. Pure secondary lesions will not alone be present, but generally tertiary symptoms coexist.

The question may, however, arise in regard to a child of more advanced age, or one who has arrived at puberty, and we then find the individual hereditarily syphilitic is generally poorly nourished, infantile in appearance, younger than his age, both mentally and physically ; it presents anomalies of development of the bones, possibly traces of interstitial keratitis, defective and notched teeth, enlargement of the liver, etc., whereas, the subject of acquired syphilis is not poorly nourished, is well developed for his age, and is conspicuous by an absence of those other symptoms just mentioned. As far as the manifestations on the skin are concerned, they may be the same—tertiary lesions—and thus present no differential peculiarities, but it should be remembered that an eruption of lesions of the secondary stage appearing in late childhood is indicative of an acquired and not of an hereditary syphilis.

Of course the points of differentiation, which have been mentioned, vary within wide limits, may be very distinct or only slight, and I do not mention them as being positive, but only as aids in many instances, in which all other concomitant factors being appreciated and estimated, they may enable a definite conclusion to be reached. The importance of distinguishing between the acquired and hereditary syphilis is greater in infants than it appears upon the surface. The prognosis as regards the child is thereby materially influenced, and also that of other children born of the same parents, while the recognition that the syphilis is hereditary will also possibly elucidate many obscure questions of diagnosis in both the children and the parents. Moreover, it certainly is not a slight matter for an infant born of healthy parents to acquire syphilis from some source or other, and then to infect some one or all the members of its family, occurrences unfortunately recorded far too frequently in literature. If the case is of hereditary origin, then the parents have nothing to fear, and any special precautions in regard to the relations between them and the infant are not of consequence or called for.

Besides the question just touched upon, there is another concerning acquired syphilis, which has frequently been of medicolegal value. We may suppose that a child previously healthy, as far as known, develops syphilis shortly after having been vaccinated How can it be determined that the symptoms are the outcome of inoculation of the disease at the time of vaccination, or the result of a latent hereditary syphilis awakened into activity by the influence of the vaccine virus? We may in general state that if the child is inoculated at the time of vaccination, then, irrespective of whether a normal vaccine pustule has developed or not, there arises at that site two to four weeks later an induration or an ulceration with an indurated base. The nearest lymphatic glands become enlarged and polyadenitis gradually ensues, and in from six to eight weeks a general eruption makes its appearance. On the other hand, normal course of vaccination lesion, no induration, no adenitis, development of constitutional syphilis very early and not later than in four weeks are positive evidences that the child was syphilitic previous to the vaccination. Between these typical instances, in which there is the presupposition that the whole course of the process has been under observation from the date of vaccination to the outbreak of the eruption, there are many possibilities and at times the diagnosis may be most difficult. A child with latent syphilis may develop an induration in the scar; or the patient may not come under care until the initial lesion has disappeared, the early eruption has faded, and all the dates bearing upon the question have been forgotten. Under such circumstances, it is necessary to examine carefully every point in the history; the child from whom the vaccine crust was obtained should be thoroughly looked up as to past and present history, and every other factor would need to be rigidly investigated in the patient's family and surroundings. Even then, however, it will at times be difficult to arrive at a definite conclusion, though the chronology of the eruptions of syphilis may furnish some aid, in so far that early manifestations of the disease occurring some years after birth, in childhood or at puberty, would exclude their hereditary origin. The differential diagnosis between the cutaneous syphilides occurring in acquired syphilis and all those other eruptions which may resemble them is too extensive to be taken up, but there are some which should be mentioned, such as roseola or erythema infantile. Due to gastric derangement, intestinal worms, dentition, or arising in the course of some general and systemic disease, it occurs especially over the trunk, and to a lesser extent over the face, and in the form of rose red macules or a punctate rash. It persists for a few hours or a day or two and then disappears without desquamation. On the other hand, the macular syphilide is of a bright or brown red color, persists as a rule for several weeks, and disappears gradually in infants with slight or considerable desquamation, and is preceded and accompanied by the polyadenitis and other systemic symptoms already mentioned. Erythema vacciniforme might likewise suggest the macular syphilide, but it appears one or two days after vaccination, or not until the eighth or ninth, when pustulation is beginning. The macules are of a bright or purplish red, they are primarily isolated, but show a tendency to coalesce and to form more or less large patches distributed over the extremities and trunk, and they disappear rapidly and without desquamation.

Other forms of erythema could scarcely enter into the category of differential diagnosis, nor could eczema, so common a cutaneous disease in children. Impetigo contagiosa, however, if abundantly distributed over the body, located also on the palms of the hands and on the soles, accompanied as it sometimes is by enlargement of some of the glands near to the lesions, may be mistaken for a pustular syphilide. If, however, it is noted that the lesion representing the latter is a pustule on an indurated base—a papulo-pustule—and that when it is ruptured, or the crust forming is removed, a sharply punched out ulceration is exposed, which on healing leaves scars, it would not seem possible to confound it with that banal eruption, beginning as superficial flaccid pustular lesions of varying size, which are autoinoculable, tend to undergo peripheral growth with progressive central involution, which do not have indurated bases, do not ulcerate or leave scars, but disappear after a variable duration and history. Psoriasis may suggest the papular syphilide, particularly as desquamation of the specific eruption is not unusual in children. It should be remembered, however, that psoriasis is very uncommon in early childhood, that its special localization is over the elbows and knees and extensor surfaces of the extremities, that the palms and soles are very exceptionally attacked, no matter how extensive the eruptions, that its lesions are superficial, tend to enlarge peripherally and are subject to marked desquamation. In these capital particulars psoriasis differs altogether from a papular syphilide, and upon them the two processes may be easily differentiated one from the other.

Any number of dermatoses may be called into consideration in making a differential diagnosis from syphilis, but it appears unnecessary to do so in view of the general and special features of the disease which have already been enumerated. Syphilis in its mode of inception, course and characteristics bears an impress distinctive and of its own, and if careful attention is given to the phenomena which it presents, there should be little risk of confounding it with other banal or severe dermatoses of different origin.

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PRACTICAL NOTES.

Serum Therapy.—Schaefer after considerable research discusses this subject, with the following general results: 1. Tuberculosis. Treated with serum obtained from refractory animals by Richet and Héricourt without definite results up to present time. 2. Rabies. Immunization by vaccination gives better results than serum treatment. 3. Pneumonia. Serum from immunized rabbits is difficult to obtain, consequently this treatment has not been used to any great extent. The subject is promising enough to deserve further investigation. 4. Enteric fever. Good results have not been obtained in practice, though laboratory experiments are very promising. This may be due to mixed infections or to length of time between the penetration of poison and the treatment. 5. Typhus. Legrain during an epidemic in Algeria used the serum from patients who had suffered from this disease, with good results. 6. Cholera. Cholera in man is different from that in animals. Nothing definite is known as yet, but Behring announces that he has a curative serum. His researches are not yet published. 7. Syphilis. Sometimes good results have been effected with the serum from dogs and lambs. 8. Streptococcus infection. The serum from animals immunized by vaccination has been employed with good effect in angina, erysipelas, and puerperal fever. 9. Cancer. There are no satisfactory results thus far. 10. Tetanus. This affection is very hard to cure in animals and no conclusive results have been obtained in man. The serum, however, acts as a prophylactic agent against tetanus. 11. Diphtheria. Here it is that the serum treatment has scored its most remarkable triumph. The few accidents that have occurred may be overlooked when we consider the wonderful success that has been attained. Serum treatment has also proved useful in snake bites and it may have a brilliant future.—*Arch. Gén. de Méd.,—Med. Rec., 1896, xlix, 264.*

Friction with Salt for Urticaria.—Dr. Meynet advocates the following simple measure as very effective in allaying the itching that results from urticarial lesions. Moisten the wheals with cold water and rub with kitchen salt for ten or fifteen seconds. A slight burning followed by a pleasant sensation of coolness is felt; then the itching decreases or ceases entirely and the papules usually disappear. Zinc ointment or rice or almond powder may then be applied. When the urticaria is extensive different parts may be treated successively in order to avoid too great irritation. This need not interfere with other treatment, such as dieting, or a purgative if the urticaria be of toxic origin. Lukewarm baths may prove beneficial.—*Revue de Médecine et de Chirurgie,—Med. Rec., 1896, xlix, 265.*

Malted Cod Liver Oil Emulsion.—The following is accounted an excellent formula for the preparation named:

MALTED COD LIVER OIL EMULSION.

Cod liver oil,	8 ounces.
Extract of malt,	8 ounces.
Yolks of egg,	two.
Tragacanth gum, powdered,	16 grains.
Hot water,	1 dram.
Essence of lemon,	10 minims.
Essence of bitter almond,	10 minims.

Weigh the extract in a ½-pint graduate and add the warm water to thin it, stirring quickly. Beat up the two yolks in a mortar with the powdered tragacanth and add the oil and extract alternately, lastly the flavoring essences, which may be varied to suit the taste.—*Am. Druggist, 1896, xxviii, 129.*

Creamy Emulsion of Cod Liver Oil.—

℞	Cod liver oil,	500 parts.
	Finely sifted sugar,	190 parts.
	Pulv. gum arabic,	
	Pulv. gum tragacanth,	aa 5 parts.
	Infusion of coffee,	200 parts.
	Rum,	100 parts.

Mix the sugar and gums in a mortar, and in the bottle which will contain the emulsion shake together the oil and cold infusion of coffee. Pour a sufficient quantity of this liquid into the mortar to make a paste, while stirring, add to the portion remaining in the bottle the rum, and then gradually incorporate it with the emulsion. —*Therapeutic Gazette,—N. Y. Polyc., 1896, vii, 54.*

Asthma.—Peribronchitis, emphysema and nasal reflexes are the main causes. Those cases depending on peribronchitis and emphysema are more frequent. In them the protracted use of three daily doses of from two to five grains of potassium iodide, together with a sufficient bed-time dose of chloral or of an opiate to meet the night attack, will have favorable results. Tincture of lobelia, two or three drachms, fluid extract of quebracho or of grindelia, one drachm daily, will often have a beneficial effect in high degrees of dyspnœa. The inhalation of stramonium, of nitrate of potassium paper, or of pyridin vapors, is often resorted to; unfortunately with so little permanent result as to give any number of proprietary medicines and nostrums a large field of activity.—*A. Jacobi, Therapeutics of Infancy and Childhood, page 328.*

Whooping Cough.—

℞	Infusion of belladonna-leaves (7½ gr.) in distilled water,	fl. ℥ vi.
	Antipyrin,	gr. xv.
	Simple syrup,	fl. ℥ i.

M. A teaspoonful every two hours.

—*Eschle, Med. Rec., 1896, xlix, 286.*

Treatment of Herpes Zoster.—Give at once a laxative and apply on a sheet of cotton the following powder:

℞	Starch,	60 grains.
	Oxide of zinc,	15 to 20 grains.
	Powdered camphor,	1 to 3 grains.
	Powdered opium,	1 grain.

Mix.

—*Times and Reg., 1896, xxxi, 192.*

For Reducing Heat in Scarlet Fever.—J. LEWIS SMITH, in the new edition (eighth) of his treatise on the Diseases of Children, says that as an agent in reducing heat without producing depression, the following prescription has given him better results than any other:

℞	Ol. Cinnamomi,	gtt. v;
	Phenacetinæ,	℈ ii;
	Sodii bromidi,	ʒ ii;
	Caffeini citratis,	gr. xv;
	Sacch. lactis,	ʒ i.

Misce. Divid. in chart. No. xv.

Sig. To a child of ten years give one powder every three or four hours; give half a powder to a child of five or six years.

Editorials.

BONE MARROW IN THE TREATMENT OF ANÆMIA.

THE recent appearance of an original article on the treatment of anæmia by bone marrow, from Dr. R. L. Watkins, and of a signed editorial in the *Medical News*, by Dr. Joseph Collins, both setting forth the advantages to be obtained by the administration of bone marrow in anæmia and progressive pernicious anæmia, prompts us to a few remarks anent the former condition, particularly as it occurs in children.

We are now in possession of sufficient evidence from reliable clinical observers to convince us that this form of therapy is of some real utility, and is an important addition to our therapeutic resources in the treatment of this disease. Naturally, as the real causes of anæmia, and we may say, also, progressive pernicious anæmia, as the latter is probably the former in a more intense form, are not, as yet, entirely understood--that is, whether anæmia is due to excessive hemolysis or defective hemogenesis, we are at a loss to know how this substance acts—that is, whether it adds something to the blood tissue which prevents destruction of the blood corpuscles, or whether it stimulates the manufacture of blood corpuscles. Deprecating this want of knowledge as we do, it should not prevent us from administering the substance empirically, if we may so call it, and collating our results, until such time that evidence will be adduced to prove or disprove anything more than a temporary or evanescent value. Anæmias occurring in children are, aside from those which are dependent upon inherent defect in the hematogenous organs, sequences and consequences of infectious and chronic diseases. These forms of anæmia are strictly symptomatic and generally of short duration. It may, however, become chronic, and then is not to be differentiated from idiopathic anæmia, and requires practically the same treatment. It is in these cases of chronic symptomatic anæmia, that is chronic in reference to the point of time as well as in cases of chronic anæmia due to some slowly progressing diseases of the internal organs and viscera, and likewise in the idiopathic anæmia of children, that bone marrow should be given a trial. The fact that its administration is not attended with any disagreeable symptoms, that children take it as readily as cod liver oil, and the fact that there is no such thing as a poisoning dose of it, are virtues that recommend its administration. It should be looked upon as a food—a food possessed of therapeutic qualities—and as such its use deserves a trial in the forms of anæmia above mentioned.

A Successful Case of Transplantation of Teeth.—E. S. PETTIJOHN reports that his daughter, aged two years and nine months, fell down the cellar stairs and struck the two upper middle incisors on the edge of the steps, extracting them as completely as if by forceps. The alveolar processes of the right tooth were fractured and the gum lacerated the entire length of the root. After the fright and crying, which continued a half hour or more, the child was rocked to sleep in the arms of her mother. We found the teeth on the cellar steps uninjured. They were placed in a normal saline solution of tepid temperature. On the arrival of an assistant with the chloroform for anesthesia, the child was sleeping quietly. Chloroform was administered without the child awakening, and the teeth were placed within their sockets and pressed into position, the edge of each tooth fitting firmly in a groove of one blade of a forceps, the hand of the operator being placed on the back of the head, with the pressure properly directed. The gums were cleansed antiseptically and the teeth left in position without further dressing or application.

The accident occurred about 2 o'clock, and when the child awoke from her sleep at 5.30, her teeth were in place. The teeth had been out of the mouth fully an hour. Milk and soft food were administered and the lacerated edges of the gum cleansed after eating. Healing of the gums occurred by first intention.

It is now over four weeks since the teeth were placed, and they are now solid, in good position, and of normal color. The gums are normal in color and consistency and the appearance of the mouth quite natural.

He reports this as a successful case of transplantation of teeth that had been out of the mouth over an hour, and as another case of chloroform anesthesia during natural sleep.—*Memphis M. M., 1896, xvi, 73.*

Book Review.

OUR GROWING CHILDREN, WITH SPECIAL REFERENCE TO THE PHYSICAL EDUCATION OF THE WEAKLY.

By GERARD SMITH, M. R. C. S.

104 pages, 2s. 6d. London, John Bale & Sons, 1896.

THIS little volume treats mainly of the prevention and home management of postural deformities. It is written in a careful and moderate spirit and abounds in hints of practical value on the physical education of children.

Much can undoubtedly be done in the prevention of postural deformities by a correct hygiene, in which abundant exercise, preferably out of doors, will form an important factor, but the author correctly recommends that all serious cases should be placed under surgical direction. The book contains much that should be more generally known and heeded by parents and guardians.

HENRY LING TAYLOR, M. D.

New Books.

BROTHERS, A. Infantile Mortality during child-birth and its prevention. (P. Blakiston, Son & Co., 1896).

EWALD, C. A. Die Erkrankungen der Schildrüse, Myxödem und Cretinismus, 1896.

MOBIUS, P. J. Die Basedowsche Krankheit, 1896.

SOLTMANN, O. Neber die Erfolge mit Diphtherie-Heilserum, 1896.

NEUMANN, H. Oeffentlicher Kinderschutz. 262 pages. (1895. G. Fischer, Jena).

SHUTTLEWORTH, G. E., B. A., M. D. *Late Medical Superintendent, Royal Albert Asylum, for Idiots and Imbeciles of the Northern Counties, Lancaster, etc.* Mentally Deficient Children: Their Treatment and Training. Six plates and five illustrations in the text. 140 pages. (London, H. K. Lewis, 1895).

SCHURMAYER, VON, DR. BRUNO. Die Diphtherie, ihr Wesen, Ursache und Bekämpfung mit Berücksichtigung der Therapie, insbesondere der Serumtherapie (Antitoxin-Behandlung). Hanover. 131 pages. (Leipzig, B. Konegen, 1895).

HAMMARBERG, VON, DR. CARL. Studien über Klinik und Pathologie der Idiotie nebst untersuchungen uber die Normale Anatomie der Hirnrinde. Seven plates, 127 pages. (Upsala. Edv. Berling, 1895).

Society Report.

BRITISH ORTHOPŒDIC SOCIETY.

The first annual meeting of this society was held at the Royal Orthopœdic Hospital, Oxford street, on Wednesday, Dec. 18, 1895.

Present: Messrs. Ewens, Vincent Moxey, Jackson Clarke. Openshaw, D'Arcy Power, Reeves, B. E. Brodhurst, Keetley, Sunderland, Little and the Hon. Secretaries, Messrs. Luke Freer and A. W. Tubby; also, as visitors: Messrs. Baker, Sayers and Tombs, and Drs. Moulonguet (Amiens) and Calôt (Berch-sur-Mer).

Mr. Brodhurst was voted to the chair. The Hon. Treasurer's and Hon. Secretary's reports were read and adopted. The latter, after mentioning the satisfactory state of the membership for the first year, went on to state that "it had long been felt by those interested in orthopœdic work, that the subject demanded more concentrated attention than could be given by the various societies in existence." This feeling found its expression in an informal meeting, held at University College, Bristol, on Friday, August 3, 1894, during the meeting of the British Medical Association in that city. The result was, that the formation of the society was determined on there and then, and Mr. Luke Freer consented to undertake the duties of Honorary Secretary pro tem.

The first general meeting was held at the Holborn Restaurant, on Saturday, Nov. 3, 1894. Mr. Keetley was elected Honorary Treasurer, Mr. Luke Freer, Provincial Honorary Secretary, Mr. A. W. Tubby, Town Honorary Secretary, and a Council of ten was formed.

The society now consists of 31 members.

Four meetings have been held, three in London and one in Liverpool, where we received most cordial welcome and much kindly hospitality. The incidents of the meeting included visits to the Royal Infirmary, Southern Hospital, and the Children's Infirmary. The collections of orthopœdic cases shown at the evening meeting were unique in excellence and interest.

The meetings have been well attended, and have been characterized by sustained interest and enthusiasm.

The communications brought forward have been full of interest in all branches of orthopœdic surgery.

One of the features of a society like this should be the annual publication of its transactions. In the American Orthopœdic Society's Transactions we have a model to follow and an example to emulate, and it is to be hoped that we shall be able, without unduly straining our resources, to publish yearly a volume in which the collected experience of members will be presented to the profession at home and abroad in a manner worthy of wide recognition on account of the merits of its contents and the excellence of its illustrations.

Mr. Keetley was re-elected Honorary Treasurer.

Messrs. Reeve, D'Arcy Power and Gratton having retired from the council by ballot, Messrs. Openshaw, Brodhurst and Rawden were elected to fill the vacancies.

It was resolved "that a sub-committee, consisting of Messrs. Reeves, D'Arcy Power, the Honorary Treasurer and the Honorary Secretaries be authorized to deal with the publishing of transactions."

An ordinary general meeting was held immediately after the annual meeting.

Mr. Reeves showed a case of congenital hip dislocation, and demonstrated his instrument for extension and counter-extension in such cases. Mr. Keetley also showed a case strongly resembling congenital dislocation of the hip. In the discussion that followed, Mr. Keetley stated that the remarkable degree of wobbling seen in the gait of the little girl he exhibited, co-existing with some lordosis, led him to ask, Can this be an early stage of one of the cases which, after the age of 3 or 4, gradually assume the characters of congenital dislocation of the hip, the femoral head slipping higher and higher and getting looser and looser? But on examining it again carefully, he believed it to be simply a case of rectangular position of the neck to the shaft of the femur—"varus of the neck." The latter condition is more frequently associated with genu valgum, and it seemed to him reasonable to suppose that the femoral neck deformity was then the primary curve and the genu valgum a secondary or compensating curve, although the condition of the femoral neck escapes notice for obvious causes, and genu valgum, owing to its obtrusiveness, is always regarded as the primary curve. A rachitic femur would, from its shape, be likely to bend at the angle of the neck and shaft before yielding in any other situation.

Mr. Reeves said he was indebted to Mr. Keetley for having shown this case. It was quite possible for surgeons to make a mistake between coxa vara and congenital dislocation; therefore, such cases were interesting from a diagnostic point of view. He thought that the case Mr. Keetley had shown was one which would be best left alone. Referring to his (Mr. Reeves') instrument for congenital dislocation, an attempt was made, in the first place, to replace the head in the acetabulum by manipulation, as in a traumatic dislocation. If that should fail, he would proceed by a method modified from Paci; he then placed the limb in the apparatus, which permitted of a double extension, so to speak, and, at the same time, allowed the child to walk. In this apparatus it was necessary to be on the lookout for mechanical stiffness of the knee. He had tried dorsal decubitus, and had not found it successful. As to the open method of treating congenital dislocation, he had not once performed any operation of this description. He did not believe in operative procedures for these cases, and would not until he was fully convinced that, after the operation, the cure was permanent. He did not think this could be so, because there was not depth of bone enough to hold the femoral head in place; if there was sufficient depth, then anchylosis, and not good movement, must necessarily ensue.

Mr. Brodhurst said: Congenital dislocations of the hip, as they are generally understood and as they are described in museums, may be divided into four categories, namely:

1st. Dislocations occurring *in utero* at a time probably when development is yet incomplete.

2d. Those which are produced at birth, and in which both the acetabulum and the caput femoris are perfect.

3d. Displacements which result from inflammation and destruction of the joint.

4th. Malformations, where the head of the femur is imperfect and the acetabulum is absent, or its position only is indicated.

Thus, congenital dislocations of the hip belong to the first class alone, for the second and third classes are non-congenital, and the fourth contains simply malformations; yet, these various conditions are described as congenital dislocations, and as though they owned a common cause. Of these varieties, the second only can be treated with certainty and advantage; but this class admits of complete restoration, so that not only may the head of the bone be replaced in the acetabulum, but mobility will be perfect as well as the length of the limb. If dislocation is discovered when the child begins to walk, or within three years of age, reduction may be effected immediately, as in ordinary dislocation; but, if the acetabulum has become filled with fatty and fibrous substances, these must first be cleared out with the curette, so that the femoral head may be deeply and firmly lodged, and, if muscular retraction has taken place, such muscles must be divided, namely, the trochanteric muscles and the adductors. It is useless to draw down the head of the femur when these muscles are retracted, for displacement again takes place so soon as extension is remitted.

Dr. Calôt also spoke on the subject at the invitation of the chairman, dwelling mainly on the results of various measures adopted in France in such cases.

Messrs. Baker and Walsham had on view some interesting cases of congenital absence of fibula.

Mr. Brodhurst showed a cast of a severe case of talipes equino-varus.

Mr. Ewens showed casts of a severe case of talipes calcaneo-valgus in an infant.

Mr. Baker demonstrated the action of his wrench for talipes equinus and varus.

The meeting terminated with a vote of thanks to the committee of the Royal Orthopœdic Hospital for the use of their board-room for the meeting.

Treatment of Diphtheria in France.—M. Monod, the officer of health to the French Home Office, in a recent report gives the number of deaths from diphtheria in the one hundred and eight large towns (with over twenty thousand inhabitants) of France in the first six months of 1894 and 1895—that is to say, before and after the introduction of the antitoxin treatment. The returns not only denote a very great diminution, but one that is constantly progressing, from fifty-six per cent in January to seventy-four per cent in June. The number of deaths from diphtheria in these one hundred and eight towns in the first six months of 1894 was 2,626, and in the same period this year, 904.—*Med. Rec., 1896, xlix, 270.*

* * *

NOTES ON TREATMENT.

INCONTINENCE OF URINE.

Find the cause and remove it as soon as possible. General anemia and muscular debility indicate a carefully selected *diet*, general *massage*, *baths* and *iron* or *arsenious acid*. Attention must be paid to the capacity of the bladder and in every case the *quantity of fluid* must be restricted. When the sphincter of the bladder is irritable and weak, *strychnia*, *ergot* or the *electrical current* is indicated.

Elevating the hips on a pillow or lifting the foot of the bed, by preventing the urine from irritating the neck of the bladder, often serves a useful purpose.

The rectum must be free from irritating matter, as *worms*, etc., and must be kept empty, especially at night. All digestive disorders should be corrected, and oxalic acid, sugar or an excess of urates and phosphates in the urine should be attended to.

Vesical catarrh, nephritis and calculus have their own indications, and all causes of reflex contraction, as vaginal catarrh, phimosis, intestinal worms, fissure of the rectum, and polypoid excrescences, must be removed. Masturbation, hysteria and epilepsy as causes of incontinence of urine, must not be forgotten.

℞ Bromide of Potassium, gr. vi to xxv.
Camphor, gr. ii to v.
Elixir of Hops, ʒ i.

Mix. Sig. To be given at bed time for hyperesthesia of the body of the bladder.—A. Jacobi.

℞ Syrup of Tolu.
Syrup of Belladonna, aa ʒ i.

Mix. Sig. A coffee-spoonful morning and evening.—J. Simon.

℞ Tincture of Belladonna, ʒ i.
Bromide of Potassium, gr. x.
Infusion of Digitalis, ʒ ii.
Water, ad. ℥ ss.

Mix. Sig. Give this draught three times daily.—Eustace Smith.

℞ Strychnia, gr. i.
Cantharides Powder, gr. ii.
Sulphate of Morphine, gr. iss.
Iron Powder, ℈ i.

Mix. Divide into forty (40) pills. Sig. One, three times a day to a child of ten years.—Bellevue Hospital.

℞ Sulfonal, ʒ ss.

Divide into six (6) powders. Sig. Take one or two powders at night.—J. Madison Taylor.

℞ Carbonate of Iron, gr. v.
Extract of Belladonna, gr. i.
Extract of Nux Vomica, gr. i.

Mix and divide into eight pills. Sig. Take one at night and gradually increase the dose.—Faivre.

℞ Hydrate of Chloral, ʒ ss.
Syrup of Orange, ℥ i.
Water, ad. ℥ iv.

Mix. Sig. Take a tablespoonful at night.—Vecchizetti.

℞ Sulphate of atropia, gr. ss.

Divide into sixty (60) tablet triturates. Take one three times daily and gradually increase the dose until the pupils of the eye are well dilated.

℞ Benzoate of Soda.
Salicylate of Soda, aa. gr. xv.
Extract of Belladonna, gr. xxx.
Cinnamon Water, ad. ℥ iv.

Mix. Sig. A Teaspoonful four or five times a day.—White.

Abstracts.

DIABETES MELLITUS IN EARLY INFANCY.

W. B. BELL (*Edinb. M. J., 1896, Feb., 709*) reports a case of diabetes mellitus in an infant, aet. three months and five days.

History.—(*a.*) *Present Illness:* For a month the parents noticed that the child was very restless, afflicted with the most intense thirst, and required a large quantity of fluid in addition to the breast. They also noticed some increase in the amount of urine and that there was a good deal of cutaneous irritation around the genitalia and thighs. Occasionally the child was very drowsy, and his breath had a peculiar odor. (*b.*) *Previous Health:* Always a very healthy child. He was born as a face presentation, and the labor was protracted and difficult, but not instrumental. (*c.*) *Family History:* Parents both alive and healthy, one sister healthy; one aunt on father's side of the house died from *diabetes mellitus*, and his maternal grandfather from *phthisis.*

Present Condition (November 24, 1895).—*General:* Well-nourished, fat, male child. *Urinary:* Urine in excess, but amount not estimated nor specific gravity ascertained. Clear, and with a sweet taste. When tested by Fehling, Moore's, and Johnson's picric acid test, contained a large amount of sugar. Microscopic examination normal. *Cutaneous:* Marked weeping eczema of the privates and thighs, especially in the folds. *Nervous System:* Child fretful and restless. *Alimentary:* Breath normal, excessive thirst, bowels regular. *Other Systems:* Normal.

Treatment and Progress.—The breast was continued, but the mother's diet was restricted to anti-diabetic food. The child was given skimmed milk and water *ad libitum* when thirsty, and one ounce of raw meat juice per diem. For the eczema an ordinary dusting powder and extreme cleanliness.

November 28.—Child is rather better; but as he was slightly drowsy, stopped the raw meat juice. Ordered bicarbonate of soda and gray powder. Urine still contains a large amount of sugar. *December 2.*—A post-mortem examination was made to-day, but nothing abnormal detected. The brain was not examined. Urine in the bladder loaded with sugar. The parents state that on November 30 the child became very drowsy, and lay with its eyes half closed, breathing snoring and irregular; he became more comatose, and died December 1.

THE NEW YORK HEALTH DEPARTMENT'S DIPHTHERIA ANTITOXIN.

The following circular of information has been issued:

The Health Department of New York City desires to direct the attention of physicians to some important modifications and improvements which have been made in the preparations of antitoxic serum which it is now able to furnish for the prevention and treatment of diphtheria.

As the result of some investigations carried on in the bacteriological laboratory of the Health Department, which have greatly perfected the methods of production of diphtheria antitoxin, it has been possible to prepare antitoxic serum of much greater power than that which has previously been in use. The curative value of any preparation of antitoxic serum is, of course, due not to the amount of serum, but to the amount of antitoxin which the serum contains, and investigations seem to show that the disagreeable symptoms sometimes occasioned by the use of diphtheria antitoxin are due, not to the antitoxin, but to the horse's blood serum in which the antitoxin is present in solution. It naturally follows that more concentrated preparations, in the use of which only small doses are required (two to five cubic centimetres), will diminish materially the frequency with which the rashes and other symptoms follow the administration of the remedy.

The preparations of antitoxin, hitherto furnished by the Health Department, are known as Nos. 1, 2 and 3 (Behring's standard), and correspond to Nos. 1, 2 and 3 of Behring's preparations. No. 1 contains sixty antitoxin units to each cubic centimetre of the serum, or six hundreds units in each phial.

No. 2 contains one hundred antitoxin units to each cubic centimetre of the serum, or one thousand units in each phial.

No. 3 contains one hundred and fifty antitoxin units to each cubic centimetre, or fifteen hundred units in each phial.

The Health Department is now able to furnish much more concentrated preparations than No. 1 and No. 2, and has therefore decided to discontinue the preparation and use of these weaker serums.

Hereafter diphtheria antitoxin will be furnished in the following grades and amounts:

Grade No. 3. Phials contain 10 c. c., 150 antitoxin units (Behring's standard) to each c. c., or 1,500 units........	$1.50
Grade No. 3a. Phials contain 5 c. c., 150 antitoxin units (Behring's standard) to each c. c., or 750 units.........	.75
Grade No. 4. Phials contain 5 c. c., 200 antitoxin units (Behring's standard) to each c. c., or 1,000 units........	1.25
Grade No. 5. Phials contain 5 c. c., 300 antitoxin units (Behring's standard) to each c. c., or 1,500 units........	2.00
Grade No. 6. Phials contain 5 c. c., 400 antitoxin units (Behring's standard) to each c. c., or 2,000 units........	3.00

It is at once apparent that preparations of antitoxic serum which contain a large amount of antitoxin to each cubic centimetre are more desirable than those containing a smaller amount, as the dose required is proportionately less and the disagreeable symptoms following its use will be relatively less frequent. The highest-grade preparations, however, are much more difficult to produce, are necessarily more expensive, and at present, even with improved methods, can be produced only in limited quantities; therefore the department, as before, furnishes the serum in a number of different strengths at prices as nearly as possible at cost.

The average curative dose of diphtheria antitoxin is about one thousand units, but for very severe cases or croup cases, or those in which the serum is not administered until the third day or later, fifteen hundred or two thousand units are often required, and sometimes the dose must be repeated, so that altogether from four to six thousand units may be required in a single case. Full directions as to the use of the serum accompany each phial.

The new preparation of antitoxic serum will be gladly furnished, as heretofore, without charge to all public hospitals, dispensaries and charitable institutions in New York City on application, and they can be obtained free by physicians at most of the depots established for the supply of diphtheria culture tubes for use among those persons who are too poor to pay for the remedy. In such cases the physician in attendance is required to fill out a blank, to be obtained at each of the stations, giving particulars in regard to the case and the ultimate result of treatment. Medical inspectors of the Health Department will also be sent, on application, to administer antitoxin in any case of diphtheria under the supervision of the attending physician.

The Health Department desires to encourage the use of anti toxic serum for the prevention of diphtheria, as the experience with its use for this purpose has been most satisfactory. From one hundred to three hundred units, according to age, are required to confer immunity. The immunity thus produced ordinarily lasts for a period of at least four weeks. With the new and strongest preparations of antitoxic serum, only very small quantities of serum (from six to fifteen minims) are necessary for the production of immunity.

TRACHEOTOMY FOR THE REMOVAL OF AN INTUBATION TUBE.

Dr. C. H. Mayo reports (*Langsdale's Lancet, 1896, i, 70*) a case of this character of extreme interest. The patient was a boy, 5 years old, suffering from croup for five days. The first insertion of O'Dwyer's tube resulted in complete relief of dyspnea. Everything seemed to be going well, and the tube was removed at the end of the third day. Respiration was easy. Three hours later the tube had to be reintroduced and remained two days. Six hours after removal, this time, it had to be reinserted. After forty-two hours the breathing became difficult. The swelling and edema of the larynx had disappeared, and through the esophagus the tube was felt in the trachea. After an attempt to extract it with the extractor, it slipped further down and respiration became violent, cyanosis rapidly appearing. Tracheotomy was performed rapidly. A probe found the tube in the right bronchus. It was loosened, and was removed through the incision. Forced respiration was kept up for fifteen minutes. The tracheotomy tube was left in for six days. The patient recovered.

GONORRHEAL RHEUMATISM IN INFANTS.

Haushalter (*La Medicine Infantile, 1895, xii, 1,667*) points out that the knowledge of this affection dates from 1885, and that since that time only 27 cases have been reported; 13 of these followed a vulvo vaginitis, 13 a conjunctivitis, and 1 a urethritis in the male. Cases in the newly born almost uniformly followed a conjunctivitis. The author thinks that as the joint affection frequently causes few symptoms many cases may pass unrecognized. An account is given of a child in which a gonorrheal conjunctivitis was followed on the twenty-fifth day of the child's life by a swelling of the left wrist and soon after by an affection of the right knee; there was no fever and the condition lasted about a month. Gonococci were found in the conjunctival secretion but not in smears made from the exudation drawn from the joint. Bouillon cultures, however, developed a germ which by its morphology and by its reactions was thought to be probably the gonococcus.

A study of the other cases shows that the joint affection usually comes on 15 to 20 days after the ophthalmia. One or very few joints are affected and the knee is the usual point of attack; the duration of the disease is from two to four weeks and the recovery is complete.

JUVENILE PARESIS.

ALZHEIMER (*Allg. Ztschr. f. Psych., Am. J. Insanity, 1896, lii, 423*) discusses the subject of early paretic dementia — the developmental general paralysis of Clouston and others. He analyzes thirty-eight cases found in the literature, and adds fully detailed accounts of three personal observations of his own. He finds that, as regards its etiology, syphilis plays a predominant, if not, indeed, an exclusive, rôle; that hereditary predisposition seems to favor it, and traumatism may be the immediate cause of the outbreak of the symptoms. Clinically, the tendency is toward a form of chronic dementia without delusions, though other psychic symptoms may occur, but generally as transient phenomena. The course and prodromal stage are rather longer than in the adult type. The paralytic symptoms generally appear early, and are prominent throughout. Hemiplegias, paralytic strokes, tabetic symptoms, optic atrophy, etc., are relatively rather frequent.

The macroscopic post-mortem findings are similar to those in other forms, and the same is true of the finer lesions. In two of his own cases he found pronounced degenerative changes in the basal ganglia.

While the cases reported show many peculiar features these are not, in his opinion, such as would authorize us to erect them into a special clinical type. Aside from the youth of the subjects, all the peculiar features are met with in different cases of paresis of older persons.

This form, however, he holds, throws a certain important light on the pathology. The usual causes other than syphilis to which paresis is attributed—grief, care, overstrain, the struggle for existence—fail here; the paresis occurs at an epoch when physical and psychic stress are at a minimum, and the influence of syphilis is all the more marked. The developmental changes credited by Clouston and others can hardly play a part as early as the ninth year (at which age some of the cases began), and therefore Alzheimer rejects these as an especially important factor.

INSANITY IN CHILDREN.

CONRADS (*Archiv. f. Kinderheilk, Am. J. Insanity, 1896, lii, 430*) gives a lengthy review of the subject of infantile mental derangement. First, he notices the variety of insanity in children and gives an extended notice of the literature. As regards the question of the relative frequency of insanity of the two sexes in children it cannot be definitely stated with our present statistics.

Among the causes heredity is first; next comes the condition of the child's bringing up, his education and training, the management by nurses by frightening their charges, the discipline and methods at school, etc. Psychic causes, fear, shame, and especially mental shock, are not to be underestimated. Emminghaus found 23 per cent of the cases he collected in the literature to be due to these causes; homesickness is not common, but cases have been known. Conrads lays some stress on the evil effects of religious excitement in predisposed older children.

Contagious (mental) and epidemic influence need mention, as they have been repeatedly observed. Onanism has been undoubtedly overestimated as a cause, but in predisposed persons it may have its effects.

Among the somatic causes, acute infectious fevers are first in frequency. Emminghaus found these as a cause in 25 per cent of his cases. Trauma, especially of the head, insolation, exposure, etc., have all had their victims. Ear disease and dentition may affect the mental condition, and the effects of nasal disease, adenoid vegetations, and tonsillar enlargements are suggestive. Middle-ear disease has been demonstrated by Bouchut and Emminghaus as causes of infantile derangement; intestinal parasites, tuberculosis, and cardiac weakness are also factors. Hereditary syphilis is the cause of juvenile paresis; whether it acts in producing other forms of insanity is uncertain. Long continued suppuration has been the cause of melancholia, as in one case of Conrad's own observation. Reflex psychoses, aside from those from ear and intestinal disorders, have been observed to follow wounds, extraction of teeth, etc. Various poisons—lead, mercury, cocaine, tobacco, etc.—have caused mental disease in children as well as in adults, and alcoholic insanity has been often reported. Conrads gives briefly a case of acute hallucinatory delirium observed by him in a child of 2½ years, from this cause.

The permanent psychoses of children occur usually in degenerate individuals, who sooner or later reveal their stigmata. The first symptoms of insanity can naturally only be looked for after the conscious perceptions have become manifest in the child and must consist in aberations of these. The earliest age at which hallucinations have been observed is 14½ months (Marce). Visual hallucinations are far the most frequent. Delusions can only show themselves after a certain stage of mental development.

The types of mental disease in children fall under two heads—the pure psychoses and the forms connected with the neuroses. Of the former it is difficult to say whether mania or melancholia is most frequent in the earlier years, and both are most frequent toward puberty. Mania generally begins without the prodromal, depressed phases, runs a subacute course, and generally ends in recovery. Melancholia may assume any of its types, is commonly gradual in its onset, and is subject to remissions. Its course and prognosis are the same as mania.

Suicide in children should be mentioned in this connection, and from the statistics of France and Prussia seems to be steadily on the increase. It is, however, still infrequent. Conrads, taking the proportions of adults and children in Prussia in connection with the statistics of suicide, finds that it is forty-six times less common in the latter than in the former.

Periodic insanity in children is usually of the maniacal type, and, with circular insanity, has an absolutely unfavorable prognosis. But few cases of either are found in the literature.

Under hallucinatory insanity, Conrads includes two types—acute hallucinatory paranoia and transitory insanity—both characterized by hallucinations, the former the more chronic and the latter the acute type. In the former occur the stuporous cases that are often confounded with melancholia. The prognosis of both, except when they succomb to exhaustion or suicide, is favorable.

Paranoia of the pure type is rare in childhood, but the degenerative prodromal stage of the original paranoia of Sander is very common. These candidates for paranoia are usually of the male sex ; in all there is a hereditary taint. They are generally quiet, sentimental, and hypochondriacal children, who are liable to feel themselves slighted by their parents, and often conceive notions of self-importance, which are the incipiency of their delusions. Hypochondria is closely allied to paranoia, and while its occurrence is rather rare, and has been denied in children, it is sometimes met with and is usually a degenerative sign. Its prognosis is only favorable in the milder cases. Imperative conceptions and acts are also met with, and frequently indicate a degenerative taint, and are often connected with masturbation as an exciting cause, but they are not so serious in their prognosis. The so-called "impulsive insanity" is diagnostically indistinguishable from these impulsive acts, though it has been accepted as a special type. It is always degenerative and of unfavorable significance.

Passing by what is said of idiocy, a word can be given to moral insanity. This, Conrads claims, rarely exists without some mental impairment, and sexual perversion is often present. Recovery is as improbable as in idiocy ; the apparent recoveries are, perhaps, only remissions of long duration.

Paresis in children has been lately reported by various authors. Its connection with hereditary syphilis has been already noted.

Among the neurotic insanities, that connected with epilepsy takes the first rank. Hysteria is commoner in children than it is generally supposed, especially in girls. Heredity is its most important etiological factor. The mental disorders of chorea consist mostly in capriciousness, irritability, and a grest tendency to sudden emotional disturbances. Hallucinations, illusions, and maniacal delirium may also occur, and Leidesdorf has observed hallucinatory paranoia. Very recently Moebius has directed attention to the resemblance of choreic to toxic insanity as supporting the view that chorea may be of infectious origin.

As regards the therapy, it would be best if all cases, except the milder forms of mania and melancholia, hypochondria, and the cases of imperative conceptions, and the stuporous cases, were treated early in a special asylum, very few, if any, of which, unfortunately, exist for children. Prophylaxis is still more important, and should properly begin literally *ab ovo.* The marriage of degenerates, insane, drunkards, etc., is a most prolific cause of infantile insanity and idiocy. Where the tendency exists in the child, its bringing up and education must be the subject of the greatest care. Ignorant and reckless nurses, especially if given to drink, may do the greatest injury, and in no case should alcohol in any form be allowed to a child under ten years, excepting, of course, as medicine in acute infectious diseases. Special care should be given to the points of masturbation and the general habits of the child ; to the possibility of nurses or others working injuriously upon its fears and imagination ; to the educational methods and discipline. It would be well were teachers obliged to study mental pathology in their professional preparation.

As a summary of the points in regard to which it is desirable to direct attention in relation to the psychoses of children, Conrads concluded his paper with the following as desiderata :

1. Statistics of infantile insanity, by means of circulars of inquiry to the medical profession, as to the actual number of insane children in their knowledge.
2. Information as to relapses, by communication from medical men as to the mental disorder of persons who had been insane in childhood. These could best be obtained from family physicians, who are usually able to follow the family history back for a lengthy period.
3. Special asylums for insane children.
4. Sufficient knowledge of teachers of the psychopathic states in childhood, and greater care in schools to mentally-defective children.

SARCOMA OF SKULL TREATED SURGICALLY AND BY TOXINS.

Dr. Abbe presented before the New York Surgical Society (*Annals Surg. 1896, xxiii, 177*) a child, eighteen months old, with a tumor over the right temporal region about the size of an orange, which was slightly larger when he first saw the patient. There was also slight exophthalmos and deformity of the orbit on the right side. The growth had first been noticed by the mother when the child was three months old. He supposed it was an osteo-sarcoma or chondroma and attempted its removal by the chisel, but found that it extended quite as deep within the cranial cavity as it projected without. Recognizing, then, that it was inoperable, he began the use of mixed toxins of erysipelas, with the result that the tumor began to subside, and was now slightly smaller than it was when he attempted to remove it eleven months ago, and the child's general condition was much better. Professor E. K. Dunham had made microscopic examination of the tumor, and had pronounced it an endothelioma of the class of sarcoma, arising from the dura.

LATERAL SPINA BIFIDA.

Alexander A., aged 9, was sent in to Mr. Cotterill's Wards (*Edinburgh M. J., 1896, Feb., 748*), on account of paralytic talipes equinus. On closer examination he was found to be suffering from a spina bifida, which protruded laterally through the sacrum through an opening opposite the right sacro-iliac synchondrosis. The tumor was about the size of an orange, and was covered by normal skin. It disappeared on pressure, and did not vary in size on coughing, but grew very tense when the patient stood upright. On passing the finger into the lower bowel it was found possible to invaginate the rectum through this bony aperture in the sacrum on to the posterior surface of that bone. Some fluid withdrawn from the tumor possessed the characteristics of cerebro-spinal fluid. The boy was found to be suffering from the following abnormalities in conjunction with the spina bifida: Imperfectly developed ears, especially the left, a very arched palate, ptosis of left eye, paralytic equino-varus of right side, congenital hydrocele, right inguinal hernia (congenital), an abnormally wide range of movement at the right shoulder joint, incontinence of fæces and urine, non-descent of the left testicle, and a somewhat backward mental development.

THE TREATMENT OF CARDIAC DISEASE IN CHILDREN.

The following rules are given by Perrier (*Mal. des Enfants, College and Clin. Rec., 1896, xvii, 11*) as to the management of this condition. In the first place, the child should be protected from cold, both because it depresses vitality and also because cold may cause internal congestions. Much fatigue is to be avoided and violent exercise forbidden. In the case of girls, particular attention is to be paid to these points at the approach of puberty. Secondly, the greatest care should be exercised as to diet, which should be simple and consist largely of milk, eggs, easily digested soups and tender, plainly cooked meats. Milk should be the drink for each meal. Thirdly, a life in the open air is very essential, and the climate should be changed by resorting to warm places in winter and cool ones in summer, for all persons with cardiac disease, particularly children, suffer from rapid changes in temperature. Cold sponging followed by dry rubbing is also of value. In the way of tonic treatment one of the following prescriptions may be used alternately every five days:

Fowler's solution,	4 drachms.

SIG.—One drop *t. i. d.*

And

Tincture of gentian,	1 ounce.

SIG.—One teaspoonful *t. i. d.*

Often, too, a small glassful of malt extract is of service after meals.

Should there be much cardiac excitability the following may be used in the dose of a teaspoonful twice a day:

Bromide of calcium,	2½ drachms
Syrup of bitter orange,	4 ounces.

Should there be a tendency to constipation, a little magnesia may be given once or twice a week.

Where there is well-marked failure of compensation and the muscle is feeble, an absolute milk diet with rest in bed is advisable, the food being given at frequent intervals in small doses and diluted, if the urine is scanty, with lactose in water or by some alkaline water, such as Sels. Every two hours between the doses of food the following may be used with advantage:

℞ Tincture of digitalis,	5 to 10 drops
Tincture of cinchona,	7 drachms
Syrup of orange,	3 ounces.

A teaspoonful about half an hour after eating.

Every morning, to avoid straining, an enema may be given to move the bowels and to favor diuresis. Once in every two weeks a small blister may be placed over the heart with advantage.

Where the failure of compensation has lasted for some time the following may be ordered:

Caffeine,	4 to 7 grains
Benzoate of sodium,	15 to 30 grains
Syrup,	5 drachms
Peppermint water,	3 ounces.

SIG.—Dessertspoonful *t. i. d.* for a child of from seven to twelve years.

Should there be cyanosis it may be wise to use:

Ext. convallaria majalis,	8 grains
Syrup,	1 ounce
Infusion of cinchona,	3 ounces.

A warm rectal injection should be ordered night and morning, and every eight or ten days a small blister applied to the precordium. If there is a tendency to dropsy, hot-air baths may be used with caution, and if sudden cardiac oppression comes on hypodermic injections of ether are to be employed.

TRANSPOSITION OF THE VISCERA IN A BOY WITH HARE-LIP AND CLEFT PALATE.

DR. J. J. BUCHANAN (*M. & S. Rep., 1896, lxxiv, 188*) exhibited a case of transposition of the viscera in a child who has a hare-lip and a cleft palate. It was noticed in this boy that the heart-beat was found on the right side of the median line, and percussion indicated that the liver was on the left side. The child was sent from West Virginia for the cure of the hare-lip and cleft palate, and the primary operation had been done. The cleft was a single one and ran into the right nostril. The bony septum was attached to the left palate process of the superior maxillary bone and very much deflected to the left side. The first operation consisted in separating the acutely projecting intermaxillary bone from the left maxilla with a saw and bone forceps, and forcing it over to the freshened edge of the right maxillary bone, and holding it there with a silver wire. At the same time the lip was united by a flap operation. This lip is not in very good shape at present, but it can be made good by a very simple operation. After the holidays an attempt will be made to close the hard and soft palates by sutures. This case is an interesting one from the fact of the extensive anomalies present, and the comparative rarity of the transposition of the viscera.

THE CHEMICAL AND PHYSIOLOGICAL CHANGES IN MILK CAUSED BY BOILING.

In the *British Medical Journal* for December 14, Dr. J. L. Kerr (*Med. Times and Reg., 1896, xxxi, 120*) states that there is reason for supposing that when fresh milk is ingested the living cells are at once absorbed without any process of digestion, and enter the blood stream and are utilized in building up the tissues. The casein of the milk is digested in the usual way of other albuminoids by the gastric juice and absorbed as peptone. There is also absorption of serum albumin by osmosis.

The chemical result of boiling milk is to kill all the living cells, and to coagulate all the albuminoid constituents. Milk after boiling is thicker than it was before.

The physiological results are that all the constituents of the milk must be digested before it can be absorbed into the system; therefore there is a distinct loss of utility in the milk, because the living cells of fresh milk do not enter into the circulation direct as living protoplasm, and build up the tissues direct, as they would do in fresh unboiled milk.

In practice, he says, it will have been noticed by most medical practitioners that there is a very distinctly appreciable lowered vitality in infants which are fed on boiled milk. The process of absorption is more delayed, and the quantity of milk required is distinctly larger for the same amount of growth and nourishment of the child than is the case when fresh milk is used.

PENIS LUXATION.

Dr. L. Baumgarten points out that penis luxation is (*Med. Standard, 1896, xviii, 55*) one of the most important injuries of that organ, and records a case in which the accident happened at the ritual of circumcision in infancy, while the reduction of the luxation was not effected until eleven years later. The child's penis had disappeared, as stated, when he was undergoing circumcision at the hands of the constituted official. The primary difficulty in micturition seems to have been at once overcome, but when the child was 6 months old he was taken to a medical man who succeeded in bringing the glans penis into view. It disappeared again, however, within the course of the day, and the father was counseled to wait until his son was older and the parts more fully developed. From time to time a swelling would appear on the right side of the scrotum, evidently marking the site of the luxated organ. When seen by Dr. Baumgarten the penis was not visible, but the scrotum was well developed. Between the mons pubis and the upper margin of the scrotum were a circular scar and rudimentary penal sheath, with a punctiform opening only admitting the smallest-sized sound, which could not be introduced into the bladder. On palpation a cylindrical body could be felt beneath the skin between the scrotum and right thigh, the lower end of which was mobile and shaped like the glans penis. During urination a small swelling appeared in the same region, evidently a kind of accessory pouch between the urethra and the external orifice above mentioned. In the operation which Dr. Baumgarten performed to liberate the penis, he first laid open this pouch and was able to draw out the glans and neighboring part of the organ, the rest requiring to be detached by the knife, owing to adhesions. The formation of a cutaneous covering to the exposed posterior part of the penis required a plastic operation, which was successfully accomplished. Dr. Baumgarten describes the method pursued in the ritual of circumcision, and enumerates the accidents that have been known to follow it, but this is the first case known to him in which luxation of the penis has occurred. He also recounts five other cases of luxatio penis due to severe injury, and in each an operation was performed to restore the organ to its normal site.

ELEPHANTIASIS AFFECTING THE NECK, SCALP, EAR AND LOWER PART OF THE FACE.

JOHN THOMSON (*Edinburgh M. J., 1896, Feb., 751*) showed a girl, æt. 14, suffering from ELEPHANTIASIS AFFECTING THE NECK, SCALP, EAR AND LOWER PART OF FACE. She was quite well until she was 3 years old, when her left cheek was noticed, during an attack of whooping-cough and inflammation of the lungs, to be swollen. No history of erysipelas can be obtained. The swelling has gradually increased in degree and extent. The left ear was not affected until some time after the neck. During the last three years the condition has spread considerably. She is a tolerably well-grown girl, and presents no other abnormality. The lower part of the face —nose, lips, cheek—has its tissue distinctly thickened. The left auricle is much hypertrophied, and is fully ⅔ in. lower than the right one, owing to the swelling of the adjoining scalp and cheek. The left side of the neck is much swollen, the right side only slightly; on both there are a few hard, deeply-situated, enlarged glands. The mucous membranes of the mouth and throat are unaffected. Those of the nose and conjunctivæ are very prone to catarrh. There is a sore on the right cheek which shows little tendency to heal. The condition is precisely that which occurs sometimes after erysipelas. It is comparatively common in the extremities, but rare in this situation.

A CASE OF URTICARIA EDEMATOSA WITH INVOLVEMENT OF THE AIR PASSAGES.

Frank Woodbury (*Phila. Polyclinic, 1896, v, 61*) reports a case in a boy, nine years of age. It was his first attack of urticaria. His face became so swollen that his eyes were closed and his upper lip particularly was disfigured and prominent. Breathing by the nose was impossible on account of internal swelling. He had laryngeal cough and speaking was difficult. All this had occurred in less than an hour after a sting from a hornet upon the right side of his neck, about an inch above the inner extremity of the clavicle. There was no other injury, and there was no decided swelling, or wheal, about the primary lesion. The front of his body and his arms and legs were plentifully sprinkled with the characteristic papules and wheals, scattered among which were lines and bleeding points, where he had injured himself with his nails in scratching. There were no vesicles, or bullæ, and no wheals were seen on the face, where edema had taken their place. He was excited and was breathing rather rapidly and noisily through the mouth, as if he had a bad cold, frequently blowing his nose in his vain effort to remove the stuffiness caused by edematous swelling of the turbinated bodies which prevented nasal respiration. He occasionally coughed, spasmodically, but without expectoration. Speaking was attended by some evident effort, but power of phonation was not lost. The velum and fauces were tumid, but the tongue was not involved. As the laryngeal symptoms were not prominent, no attempt was made to introduce a mirror, which the excited condition of the patient, moreover, would have made a difficult and unwelcome task. The body temperature was below 100 degrees. After a warm bath, to relieve restlessness, a tablet of morphin (¼ grain) and atropin (1-60 grain) was dissolved in a tablespoonful of water and one teaspoonful administered every quarter of an hour. Powders of acetanilid (2 grains) and sodium bicarbonate (5 grains) were left, to be given every hour until the symptoms were relieved. Inhalations of the hot vapor of water were given. To relieve itching, the patient was told, instead of scratching, to wipe surface with sponge or soft cloth, wet with the soda solution (made by pouring boiling water upon sodium bicarbonate) and to apply carbolized petrolatum (3 per cent) to the scratched places. When the patient was seen later in the day the symptoms had become much less severe. A small dose of calomel and sodium bicarbonate was given at night, which acted well in the morning. The patient was now convalescent and could scarcely be kept within doors. He had regained the power of breathing through his nose, but had a free discharge of mucus from his nasal passages for a day or two subsequently, for which no treatment was given. There was no desquamation and no sequela was manifested.

CERVICAL RIB.

H. J. Stiles (*Edinburgh M. J., 1896, Feb., 753*) showed a female child aged 18 months, with a well-marked cervical rib on the left side. The mother did not discover the deformity until the child was some months old. The most striking feature, on inspection, is the high shoulder, with a corresponding shortening of the neck on the affected side, especially when viewed from behind. (It was from this aspect that the mother first noticed the deformity.) In front a prominence is seen above the middle of the clavicle. On palpation a curved bony swelling is felt arching forwards above the clavicle as far as the outer border of the sterno-mastoid, where it appears to end in a free extremity. Posteriorly the bony swelling can be traced back to the spine. It has no connection with the scapula. The pulsation of the subclavian artery cannot be felt ; thus we may conclude that the vessel is lying anterior to the extremity of the cervical rib, and is not arching over it. Cervical ribs, although not infrequently met with in the dissecting-room, are seldom seen clinically, and it very rarely happens that the doctor is directly consulted on their account. He may, however, be consulted merely on account of the deformity, in which case the patient will most likely be an infant or young child. It is important, therefore, that the possibility of such a congenital abnormality be kept in mind, and the deformity to which it gives rise be recognized. In all, some eight or ten cases have been recorded (five during the present year—see paper by De Quervain, *Centralb. f. Chir., 1895, No. 47*) in which the cervical rib has been excised in consequence of pressure upon the brachial plexus or the subclavian artery, or upon both.

INFANT FEEDING TO DATE.

The discovery that certain fatal gastro-intestinal catarrhs prevalent among infants were due to the presence and activities of micro-organisms, which produced poisons in milk, but could not affect other food stuffs, marked an era in the treatment of the digestive diseases of children. It is a question, however, whether the profession at large has fully grasped the meaning of this discovery. The practitioner has gone off on the trail of milk disinfection, and overlooked the more important indications, which demand that milk shall be wholly discarded in certain cases of indigestion and its place filled by meat and grain products and by egg-albumin.

The physician of the future, if he be wise, will more and more promptly, in cases of severe gastro-intestinal catarrh of infants, drop milk and take to these substitutes. He may try one or other of special infant foods at first, but unless quick relief follows, he will betake himself to feeding with other than milk. What may be done by intestinal disinfection during continuation of the milk diet is not yet determined. It is a large undertaking to disinfect a bowl full of milk clots and fermentation products by means of poisonous chemicals, especially the coal-tar drugs, which may vary in their composition and strength.

One becomes very skeptical of therapeutists who make reports on such intestinal antisepsis, fearing lest the observer has secured no effect at all from his drug, or lest a repetition of the dosing in later cases may poison the little patient, perhaps fatally. Is it not wiser to discontinue the fermentable substance (milk) and sweep its half decomposed residues gradually out of the canal by the aid of aperients, until by degrees the stomach and bowels shall have gained sufficient health to be able again to digest milk and to prevent by wholesome digestive secretions its harmful decomposition?

The fact is that very little apparent progress has been made in recent months in infant-feeding, and no wonder! The bacteriologist is unraveling, but slowly, the very intricate processes of bowel-sepsis, and has as yet but little of general interest to tell.

The boom-doctor has betaken himself to the elaboration of complicated methods of sterilization, with the production of most impressive and expensive apparatuses; or has flitted to other fields where temporary distinction is easily won. The quiet practitioner of thoughtful ways is working out in his daily rounds the very unpretentious principle of diet-change, and has little worthy of extensive remark to contribute.

The custom started in some cities of ordering milk by prescription from public laboratories is rather interesting. The prescription calls for milk containing amounts of casein, fat and sugar, such as the physician deems necessary at the time. Under certain circumstances this might be a great blessing to the community. What it will amount to—whether it will be more than a fad of a few physicians—cannot yet be said. The baby is to be weighed every day to see how he is getting on.

A French observer holds that the dilution of milk with water or barley water for infants is injurious; that the addition of water favors dyspepsia. He gives an amount of undiluted sterilized milk suitable to the age of the child, much smaller in quantity than the diluted feeding ordinarily given to infants. His British translator and admirer weakens, however, when it comes to applying the theory, and suggests that if the baby has derangement of the digestive organs dilution would be desirable.

The experience of some is that if a baby does not get a large enough quantity of liquid at each feeding to comfortably fill his little center of interest he makes the family miserable until additional liquid in the form of barley water or catnip tea is administered. This is very inconvenient to the mother, and probably amounts to the same as if the milk were diluted at the first.—*Editorial, Maryland M. J., 1896, xxxiv, 320.*

PERIPHERAL NEURITIS FOLLOWING MEASLES.

Dr. John Thomson (*Edinburgh M. J. 1896, 750*) showed before the Medico-Chirurgical Society a boy of 6½ years, suffering from deformity of the hands and fingers due to an attack of peripheral neuritis following measles. He had a severe attack of measles with pulmonary complications during the latter half of March. This pulled him down very much, but he seemed to have recovered pretty well. About the beginning of June he began to complain of tiredness and pains in his feet. Although the pains were never severe, his ankles gradually became extended so that he could not put his heels to the ground. His knee-jerks were gone.

No rise of temperature. On 1st July Dr. Paterson found for the first time that there was distinct analgesia of the feet and legs. This passed off, and on the evening of the same day there was hyperesthesia. There was also marked frequency of micturition. In the end of July, the feet were still so pointed that he could not stand, but there was no pain or tenderness. Early in September he was able to walk, and now his legs and feet seem quite right. On June 30th (a month after the feet) both his hands became sore in one day—with half an hour's interval. The pain was very severe, so that he screamed with it day and night for some days. It gradually subsided, but was still present in some degree four weeks later, and the hands remained very sensitive, apparently from hyperesthesia of the skin as well as of the joint structures. The wrists became fixed in a flexed position; the fingers and thumb of the left hand were flexed towards the palm, the fingers of the right being extended at the metacarpo-phalangeal joints and flexed at the others. Attempts at extension were very painful. The position of the hands is slowly improving; they are very much less tender and the range of movement of the joints is steadily increasing under regular passive exercises. The power of voluntary movement also is slowly returning to the fingers and hands. The prognosis seems quite good as to ultimate complete recovery.

Pure Milk.—The circulars issued by the Board of Health to all milk dealers, if the sections are enforced, will prevent absolutely the sale of adulterated milk in the city of New York. The sections provide that no milk shall be offered for sale or delivered in the city without a permit in writing from the Board. Milk shall not be stored in any place used for sleeping or domestic purposes, nor shall any be opened therein. It shall not be transferred from cans to bottles in the street, or on ferries or in depots. Bottles in which it is put shall be cleansed after a specified fashion. Permits from the Board to sell milk must be posted in stores.—*Am. M.-S. Bull., 1896, ix, 277.*

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PEDIATRICS

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Original Articles.

TYLOSIS PALMAE ET PLANTAE: WITH THE DESCRIPTION OF TWO CASES, MOTHER AND DAUGHTER.

By J. W. BALLANTYNE, M.D., and GEORGE ELDER, M.B., C.M.
Edinburgh.

AMONG the various forms of epidermal disorder which have hyperkeratosis as their evident feature *tylosis palmae et plantae* is specially worthy of note. This disease may be defined as a hypertrophy of the horny layer of the epidermis affecting only the palms of the hands and the soles of the feet and leading to the development of a hard plate in those regions.* The case about to be described, which was carefully examined by both of us, occurred in Dr. Elder's practice; the history of the patient and her family will now be given and thereafter the cutaneous affection itself will be more fully considered.

DESCRIPTION OF A CASE OF TYLOSIS PALMAE ET PLANTAE.

The patient, E. C., a girl eight years of age, shows a distinct callosity of the palms of the hands and of the soles of the feet. The condition is most noticeable in the palms, to which it gives a peculiar yellow color, and a hardness and roughness readily noticed on shaking hands. The thickening resembles that present on the hands of a workman who uses tools frequently, and is all the more prominent from its absence at the flexures. It is greatest on the hypothenar eminences, but it is also present on the thenar eminences and

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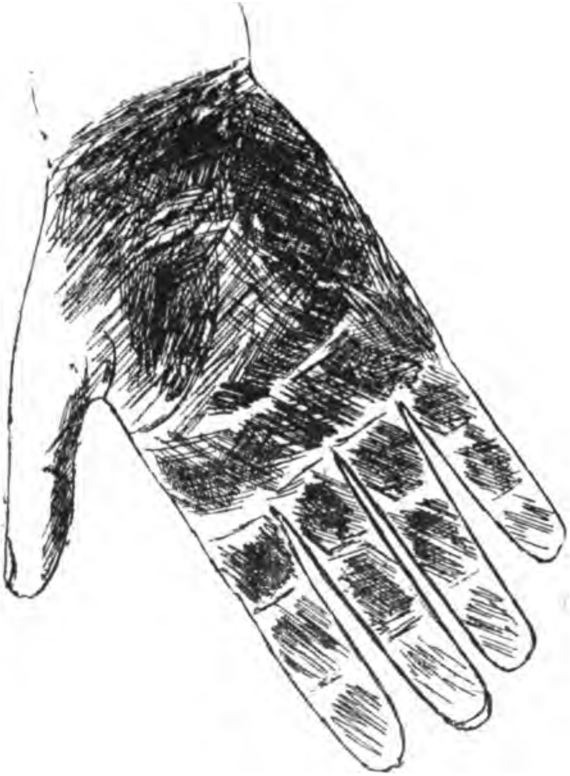
*Crocker (H. R.) *Diseases of the Skin*, 2nd Edit., p. 363, 1893.

along the palmar aspect of each finger, as well as over the proximal part of the palm. Indeed no part of the palm is quite free from it, save at the lines of flexure. It is strictly limited to the palm and does not reach the dorsum of any of the fingers, and above it is sharply defined by the line of flexure of the wrist, beyond which there is absolutely no trace of it. The distribution of the thickening is shown by the accompanying figure, in which the thickening is represented by shading—the intensity of the shading corresponding to the extent of the thickening.



The feet are also affected in a similar manner, although here the thickening is not quite so noticeable. It is most marked along the lines of pressure of the sole, and as in the hands it is strictly limited to the palms, so here it does not extend beyond the soles.

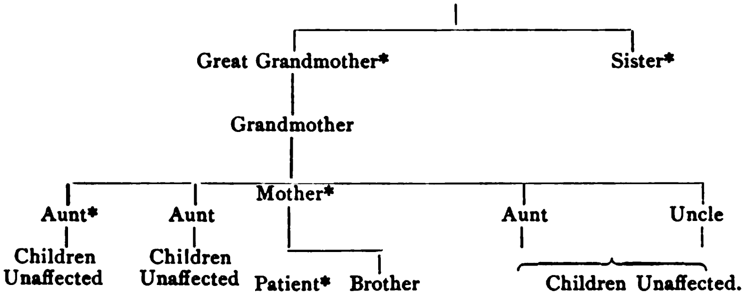
The condition was first noticed by the mother when the girl began to walk about freely, and it has remained present ever since, even when there is practically no friction on the hands. It is, however, aggravated by friction, and the right hand, which is more used than the left, shows a greater degree of thickening. Her mother states that the hands and feet "peel" in pretty large scales at times, usually every spring and autumn; but even when this occurs the skin beneath is still distinctly affected. A few weeks ago, after scarlet fever, there was skinning of the palms and soles, the scales shed being very large and thick. Before the skinning commenced the palms were much thicker and yellower than usual.

When the patient went first to school she developed a large number of warts on the fingers, said to have been acquired from the girl who sat next to her in class; but at present scarcely any of these growths remain. No other peculiarity of the skin can be observed. The teeth, hair, and nails seemed quite normal.

The point of special interest, however, in the case is the hereditary history. Her mother has a similar condition of the palms and soles, noticed soon after birth, and all her life her rough hands have been a source of some annoyance to her. She has also constantly to use a file to keep in check the growth of the skin at the roots of the nails. The patient's father's hands are quite free, as are also those of an only brother, who is considerably over one year in age. No other members of the family could be examined; but it was elicited that none of the father's family had ever been affected, whilst the following interesting history was got from the mother, a particularly reliable and intelligent lady.

She, the girl's mother, is French, and, as already mentioned, has "hard hands" like those of the patient. Of her sisters, three in number, one has a similar condition; the other two have not, and neither has her brother. The maternal grandmother of the patient had nothing of the kind; but the great grandmother (maternal), as well as her sister, had a similar condition. No further particulars could be elicited save the remark that there was a tradition that it had been in the family for generations, but that it affected only female members and only some of them; that it was only transmitted through the female members, and that it usually skipped a generation. In the present instance, however, this last peculiarity is absent, for both mother and daughter are affected.

For the sake of clearness this history may be represented as a genealogical tree, in so far as it is known to the patient's mother In this the persons affected are indicated by a *.



For years the patient's mother has been using glycerine and pumice stone for the thickening; but although the condition was thus made less distinct it was by no means removed. A few weeks ago a solution of salicylic acid in ether (10 grs. to the oz.) was ordered to be applied, and the state of the hands has been already much improved; but, of course, it would be rash to expect a complete cure.

TYLOSIS PALMAE ET PLANTAE.

Historical Notes. According to Unna (7),* who described the disease with some fullness in 1883, Ernst (1) and G. Simon (*Die Hautkrankheiten*, p. 48, 1851) were the first to record cases. In 1851, also, Pickells (2) noted what he regarded as a congenital (" connate ") instance of it in a boy of 13 or 14 years of age, and in 1879 Bulkley (3) saw a woman of 25 in whom it had been present " since infancy." Thost's inaugural dissertation (4) contained a most interesting account of a family in which this disease was hereditary. Other cases were those noted by Bocgehold (5) and Startin (6). Since Unna's classical paper appeared in 1883, G. H. Fox (8), Biart (9), Date (10), Jonathan Hutchinson (11), Crocker (12), H. G. Brooke (13), Sherwell (17), Bassaget (18), Dupré and Mosny (19), Hallopeau (20), and Bergh (21) have all written on the subject and have added to the list of known cases.

Synonyms. As with so many dermatological states so with tylosis palmae et plantae a number of synonymous terms are in use. It is the " ichthyosis palmaris et plantaris " of Thost and others, the " tylosis palmae manus plana " of Hebra, the " keratoma plantare et palmare hereditarium " of P. G. Unna, the "inherited keratosis of the palms and soles " of Hutchinson and G. H. Fox, the " hyperkératose palmaire et plantaire" of Hallopeau, and the "kératodermie symétrique des extrémités congénitale et héréditaire" of Besnier and Doyon* and of Bassaget. "Tylosis palmae et plantae" seems to us a short and sufficiently descriptive term for all practical purposes.

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*The figures within brackets refer to the bibliography at the end of the article.

Clinical History. The most striking fact in the history of cases of hyperkeratosis of the palms and soles is *heredity*. This heredity may manifest itself either in the existence of the disease in parent (mother or father) and child, or in grandparent and child, or in the occurrence of "family prevalence"; these forms may also be met with in combination. In a few cases, however, there was either no hereditary history or no reference to it, viz. in Nos. 5, 6, 17, 19 and 20. The least marked form of heredity—family prevalence—was present in Nos. 2, 11 and 21; in No. 2 the boy described and the other children of the family were affected, in No. 11 the patient himself and three of his sisters showed keratosis of the palms and soles, and in No. 21 two brothers had the disease whilst six other brothers and sisters were healthy. Nos. 3, 7b, 8b, 9, 13, 14, and 18 had a more distinct hereditary history; in No. 3 a girl, her father, her father's brother, and her father's father were affected; in No. 7b a mother and her two sons and one daughter were the subjects; in No. 8b a man had keratosis palmae et plantae with keratose pilaris of the arms and thighs and general mild ichthyosis, whilst his father had the palmar and plantar lesions; in No. 9 a man, his brothers and sisters, his father and his father's brother were all sufferers; in No. 13 (two cases) the lesion was present in the mother, in her parents and in one or more of her children; in No. 14 a man and his father had tylosis, whilst three of his five sisters had xeroderma; and in No. 18 a man, his three brothers and his father showed the morbid state, whilst his only sister escaped the skin lesion, but died insane. More complicated histories were given in Nos. 4, 7a, 8a, 10, 12 and in our own observation. Thost's record (4) was a most remarkable one, for there were seventeen cases in four generations of the same family, eight of which were seen by the author himself: the great grandfather of the little girl (Lina Neubrandt) had keratosis palmae et plantae; he had seven children, six males and one female, of whom five (all males) inherited the disease; of the five affected males, one died young, one was lost sight of, two had families in which there was at least one case of the malady, and the fifth (Heinrich Heilmann) was twice married and had a large family, consisting of eight children, five males and three females, of whom six (four males and two females) were similarly affected; finally Heinrich Heilmann's eldest daughter (Margarethe Neubrandt) had four children, three girls and one boy, and of these all the girls, including Lina, the first of this remarkable family who was seen by Thost, had the cutaneous anomaly. In one of Unna's observations (7a) there were eight cases (five males and three females) in three generations and the malady was transmitted through males as well as females; and one of the patients seen by G. H. Fox (8a) was a member of a family of eight, every second one of whom inherited the disease, while his mother, mother's father, an uncle, and two nephews were similarly affected. The genealogies of Nos. 10 and 12 may be given in tabular form. That of Horton Date's patient is as follows:

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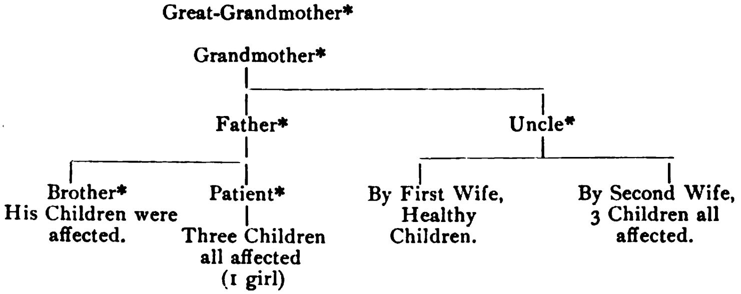
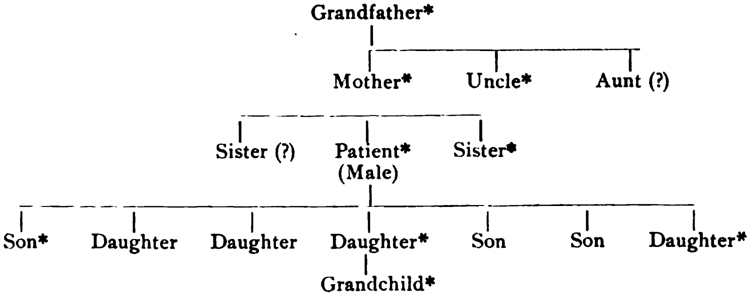
* Besnier (E.) and Doyon (A.) *Maladies de la peau* (Kaposi), Vol. II., p. 41, 1891.


Great-Grandmother*
Grandmother*
Father*
Uncle*
Brother* His Children were affected.
Patient*
Three Children all affected (1 girl)
By First Wife, Healthy Children.
By Second Wife, 3 Children all affected.

The family tree of Crocker's patient (12) was very interesting.



In this case, which closes this remarkable demonstration of heredity, nine individuals in five generations were certainly affected with the disease, four were not so affected, and with regard to two there was some doubt. From what has been said it will have been learned that when the heredity was direct the transmission was sometimes through the males only (Nos. 3, 8b, 9, 14 and 18), less often through the females only (Nos. 7b, 13 and 22), and sometimes through the males of one generation and the females of another (Nos. 4, 7a, 8a, 10 and 12). In our case (22) the females only were affected, and skipping a generation had occurred at any rate once.

There is no limitation in the matter of *sex*, for an analysis of the family histories shows that out of ninety-three cases in which the sex was stated fifty-seven (61 per cent) were males and thirty-six (nearly 39 per cent) were females. There is thus a distinct preference for the male sex. Possibly the fact that men are more actively engaged in manual labor than women may serve to account for the above circumstance; their environment is more favorable to the development of the latent and hereditary tendency.

With regard to all the cases which have been referred to in this paper there is good reason for supposing that they were congenital.

We do not mean to say that in all of them was the anomalous condition of the epidermis of the palms and soles present at birth, although in some instances this was affirmed, but on hearsay evidence. In all, however, it would seem that the predisposition to the disease was truly congenital, although pressure and friction might be necessary to develop the characteristic lesion. In all Thost's cases (4) it was said that the disease was observed in the first week of life as a slight roughness of the epidermis of the palms and soles, which rapidly increased in thickness. With regard to the second family seen by Unna (7b), the interesting remark is made that immediately after birth both palms and soles were observed to be surrounded by a bluish border, on which, after the seventh month horny growths began to appear, and trom which these growths soon spread to the rest of the palmar and plantar surfaces. In other cases the lesion was first noticed at three months, or when the child began to creep, or when it began to walk (e.g. in No. 22) ; and in one instance (No. 20) it would seem that it became evident only at the age of 20 years, nevertheless Hallopeau, the reporter, regards it in this instance also as of embryonic origin. It may be concluded that if the skin of the palms and soles were carefully examined at birth some slight morbid change would be discovered in some cases at least.

Symptomatology.—In all the recorded cases both the palms of the hands and the soles of the feet showed thickening of the epidermis, and it is from this typical distribution of the lesion that the disease has got its name. In Nos. 18, 19 and 21 the hyperkeratosis was not limited absolutely to the palmar and plantar surfaces, but affected to some extent the dorsal surface of the digits also , in Nos. 2 and 5 a similar condition was found on the knees ; and in Nos. 11 and 14 there was general xeroderma. Nos. 8b and 19 were interesting : in the former there was keratosis pilaris of the arms and thighs, general ichthyosis of a mild type, and tylosis palmae et plantae ; whilst in the latter the palmar and plantar lesion was accompanied by a similar epidermic thickening over the patella and olecranon and on the lips and mucous membrane of the palate, as well as by mild ichthyosis of the extensor surfaces.

With regard to the characters of the lesion itself, the description which we have given in connection with the girl, E. C., may be taken as typical of the minor degree of the malady. The plantar and palmar surfaces of the feet and hands are covered by a thick yellow or yellowish-brown cuticle like a layer of wax. This gives to the palms and soles a peculiar hard and horny feeling. Sometimes the cutaneous thickening is greater over the thenar eminence, sometimes over the hypothenar, but as a general rule it is most marked along the lines where there has been most pressure. In more marked cases the thickened epidermis is split up by grooves or fissures into a large number of irregular areas or islands and the whole forms a mosaic. The grooves vary in depth and in width and have no connection with the natural lines of flexure of the palms and soles, in some instances, indeed, crossing them at right angles. In parts subjected to much pressure the fissures may disappear altogether. Every now and again desquamation of the thickened cuticle takes place, sometimes, as in our case, in spring and autumn, in other instances in the autumn only, as in No. 12.

The lesion is usually painless. If the hypertrophied epidermis be removed, a red, bleeding surface with enlarged papillæ is exposed. There is often some difficulty in completely flexing the joints of the palms and soles. The affected area is not infrequently surrounded by a narrow erythematous border or zone, which passes insensibly into the surrounding healthy skin. The condition becomes more marked as age advances up to a certain limit ; it is thereafter practically permanent, or is kept in check by the patient use of pumice-stone, etc.

In certain of the recorded cases itching was a prominent symptom. Tactile sensibility is present, but in a blunted state ; and sensibility to heat and cold, and also to pain, is usually much diminished. In most cases there is a dryness of the affected skin (xeroderma) ; but in others (Nos. 7 and 18) there was hypersecretion. In No. 7 also the sensibility to touch was unimpaired, and there was osmidrosis as well as hyperidrosis. The nails have been found in a ragged state and incurved on themselves; in No. 20 there was a certain degree of sub-ungual parakeratosis.

The condition of the hair and teeth is not often reported; but in No. 18 both these structures were normal. The general health is usually quite good, although in one or two cases (Nos. 18 and 20) coldness of the extremities and "dead fingers" were complained of, and in No. 3 there was rheumatism. Sometimes a neurotic family history has been recorded, but the patient is generally free from nervous symptoms and visceral lesions.

Pathology.—The horny layer on the palms and soles had a thickness, varying in most cases, from one-eighth to one-sixteenth of an inch; but over the ball of the thumb or great toe it might reach half an inch. The other naked-eye characters of the lesion have been referred to under the symptomatology; but it may be noted that Hallopeau was of opinion that in the case observed by him (No. 20) the epidermic thickening was especially marked round the dilated sudoriparous gland orifices. Thost (4) has described the microscopic appearances of the diseased integument as follows: The papillae were increased in length five-fold, their breadth was somewhat less than normal, and their number was not greater than usual. The prickle-cells were not enlarged or otherwise altered; but their number was greatly increased, and on this account the rete malpighii was much broader. The stratum granulosum was normal. The horny layer was much thicker than in the healthy condition, and the increase was chiefly in its middle layer. The cutis, as a whole, was thicker than usual, and the adipose tissue more marked. The blood-vessels appeared to be enlarged. A general hypertrophy of all the layers of the skin was noted by E. Dupré and Mosny (19).

Pathogenesis.—The names which have been given to this disease by various writers indicate that all are not agreed as to the nature of the morbid process. Unna (7) places it in the group of the acanthoses along with condyloma acuminatum, verruca, fibroacanthoma cornificans, tyloma, and clavus, looking upon it, indeed, as a variety of cornu cutaneum; he gives ten reasons why it should be regarded as more nearly allied to horns than to ichthyosis. Bronson[*] adopts Unna's view of the matter. Others have regarded it as a localized form of ichthyosis, and that it is closely related to the condition known as fetal ichthyosis is beyond doubt. Whether, however, it is a pure hyperkeratosis or is both a hyperkeratosis and a hyperacanthosis may in the meantime be left unsettled, for even as regards fœtal ichthyosis this question has not been decided. Hallopeau (20), it may be remarked, regards it as a form of naevus and as of embryonic origin ; but *naevus* can scarcely be looked upon as a precise pathological term. Dupré and Mosny (19) call it a congenital lesion of the skin of an ichthyotic kind, in certain points resembling congenital verrucose naevi. Whatever name be given to the lesion it is essentially a hyperplasia of the epidermis on certain clearly defined areas of the surface of the body.

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[*] Bronson, E. B., Journ. of Cutan. and Ven. Dis., ii, p. 206, 1884.

With regard to its mode of origin also opinions differ. That it is congenitally pre-disposed to seems, however, to be quite clear ; it also appears to be certain that this pre-disposition is rarely strong enough to bring about the full evolution of the disease, and that an exciting factor, in the form of intermittent pressure or some other irritant is necessary to develop the characteristic lesion. This view is supported by the markedly hereditary character of the malady, to which reference has already been made. Hutchinson (16) says with regard to one of his cases : "No doubt the child was born with a peculiarity in the structure of the skin which rendered it less capable than usual of resisting the effects of mechanical irritation ; thus when the child began to walk and to handle toys the skin revealed its defective organization by passing into a condition of chronic inflammation. In this respect we have a parallel with certain other well-known types of disease, such as retinitis pigmentosa, Kaposi's disease, and many others in which nothing is to be observed at the time of birth, but in which exposure to light, sun, etc., at once brings on a peculiar form of degeneration of tissue." What this congenital peculiarity in the structure of the skin is cannot be certainly determined ; but that it is in some way connected with an unusual state of the epitrichium is very probable. Ohmann-Dumesnil* suggests that the permanent adherence of this embryonic layer is the cause of the various thickenings, general or localized, to which the name of ichthyosis has been given. This may be so; but it is well to remember that the normal functions of the epitrichium are not yet known, and that speculations as to its pathology are, therefore, premature. Still the suggestion is a valuable one, and it may be that in the epitrichium and its morbid states may be found the causes of many, if not of all, congenital epidermic anomalies.

Brooke (13) is of opinion that the symmetry of the lesions is not sufficient ground for supposing a primary central causation ;

Dumesnil (A. H. Ohmann). "The human epitrichium." *Teratologia*, ii, p. 155, 1895.

some cases are to all appearances primarily central tropho-neuroses, but in the majority the fact that it spreads from one limb to another or from hands to feet, or *vice versa*, supports the theory of a reflex origin. Hallopeau's observation (20) that the morbid process begins round the dilated orifices of the sweat glands is of interest; this peculiarity is shared by other skin diseases, e. g., pityriasis rubra pilaris, seborrhoeic eczemas, lichen planus, etc.

We have thus far been speaking only of cases in which tylosis palmae et plantae was congenital in origin in at any rate the wide sense of the word; but an apparently identical lesion may be produced in adult life as a consequence of the administration of arsenic. Recent instances of this condition have been reported by A. Mathieu* and A. Giletti** (although Giletti doubts the arsenical origin of his case). Even in these cases, however, a congenital predisposition may have been present, and the arsenic may have acted as the exciting and not as the sole cause.

A somewhat similar malady has been described by Max Neuburger (*Monatshefte f. prakt. Dermat.*, xiii, p. 1, 1891) under the name of akrokeratoma hereditarium, but in it the extensor surfaces and especially the backs of the hands and feet were the parts affected, and the lesion, although resembling in its nature that in tylosis, was not sharply limited in distribution.

Treatment.—The usual treatment adopted in cases of tylosis palmae et plantae is the purely palliative one of applying glycerine to soften and using pumice-stone to remove the hardened and thickened epidermis. "In congenital cases," says Crocker, "a cure can, *a priori*, scarcely be expected," yet in our case distinct improvement has already followed the painting of the affected parts with a solution of salicylic acid in ether, and Unna (7) cured five members of one family with a similar but stronger solution (10 per cent.). Ichthyol, also, has been recommended; Bulkley (3) employed diachylon ointment; and Hutchinson (14) advised arsenic, tar ointments, and the use of cork soles. We are not aware whether thyroid feeding has yet been tried in such cases.

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22. Our own observation, as related above.

NOTE.– To Ernst's paper we have been unable to refer in the original; all the other references have been verified.

Adulteration of Food.—At a recent session of the Committee on the Adulteration of Food, T. H. Elliott, Secretary of the Board of Agriculture (London), testified that among the samples of food examined by the government 51 came from the United States and 39 from Canada, not one of which was adulterated. Germany, he added, made the worst showing, adulteration having been found in 37 out of 124 samples examined.—*Ev. Post.*

The Craig Colony For Epileptics, at Sonyea, N. Y., is about to be opened, The managers state that "an idea is gaining ground, not only in this, but in other States, that the State of New York is providing a large institution for the care of epileptics generally, and that all necessitous and dependent epileptics will be received and cared for. This is a grave error and should be early and earnestly discountenanced. Another growing misunderstanding is in regard to the reception of private patients in this institution. This is a feature entirely secondary in character, and is only to be entertained after all the dependent epileptics of the State have been provided for.

Spitting.—St. Louis' Health Board hopes to improve manners and increase sanitation by law. It will ask the Municipal Assembly, as the municipal legislative board in St. Louis is termed, to adopt an ordinance making it a misdemeanor for any person to expectorate on the floors of street cars or other public conveyances, or in hotel corridors, theatres, public halls and places of worship; also that the porters or persons in charge of the cars and public places be required to furnish cuspidors in sufficient number, and that they be required to clean the vessels daily, using some disinfecting fluid to be approved by the Board of Health; also that suitable provisions be made for the inspection of the vessels and the public places where they are provided. The members of the Health Board were unanimous in the action taken, but knowledge of the personnel of the Municipal Assembly does not give much hope of action by that body.—*Post.*

A CASE OF APYRETIC CROUP.

By A. Cordes, M. D., M.R.C.P.
Geneva.

On February 15th, 1896, I was called to R. B., aged 21 months, whose cough was rather hoarse. The boy had a slight coryza, the throat was uniformly red, without patches. There was no conjunctivitis and the temperature was normal.

Measles being prevalent in Geneva I thought it might be the beginning of that disease and I prescribed some chlorate of potash for the sore throat. Towards the evening of the 17th the cough became more stridulous and aphonic. Facies good.

On the 18th there was laryngeal stridor, and towards evening on the 19th, the dyspnœa grew worse. There was no cyanosis, and the temperature was 100° F. At 9 p. m. the dyspnœa had increased and there was drawing in of the epigastrium during inspiration. The pharynx was red, but there was no cervical glands. Till 6 p. m. the boy had been walking about the apartment, playing and bright. In consultation with Dr. Thomas an injection of 10 grammes of Roux's serum was given in the retro-trochanteric space. During the child's struggles, the voice became aphonic.

At 2 a. m. on the next day the dyspnœa had increased so much that Dr. Thomas operated at once, inserting a small cannula No. 00. A piece of membrane was expelled through the cannula. Seven hours after the operation the child was quiet, respiration 40 to 48, and temperature 101.5° F. In the evening the temperature rose to 102.3° F., but shortly fell again to 101° F. The next day (21st) a second injection of 10 grammes of Roux's serum was given.

The only interest in the case is the complete absence of any high temperature which is so characteristic of membranous croup when uncomplicated.

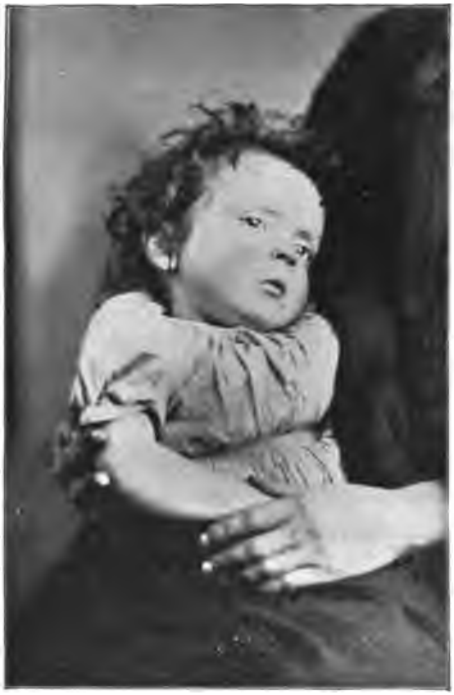
Fatal Varicella.—Cassell (*Archiv. für Kinderheilkunde,—Am. J. Med. Sc. 1896, cxi, 94*) makes an addition to our knowledge of the dangerous complications of chicken-pox. Five out of twelve cases treated in his polyclinic had albuminuria or nephritis. All the patients were from the poorer classes, between the ages of five months and three-and-a-half years. The albumin appeared after desiccation, not earlier than the fourth or fifth day. Three of the patients died, albuminuria continuing to the last. In the other cases albuminuria was of brief duration. In one of the fatal cases, a previously healthy child treated under unfavorable hygienic conditions, the vesicles became gangrenous and ulcerated.

PHYSIOGNOMY OF PLEURO-PNEUMONIA.

By John Thompson, M.D.
Edinburgh.

I. Willie M., aged 22 mos., photographed on 5th day of an attack of pleuro-pneumonia limited to part of the base of the right lung.

Child too ill to notice much. Face flushed; eyes bright but their expression dull and anxious.

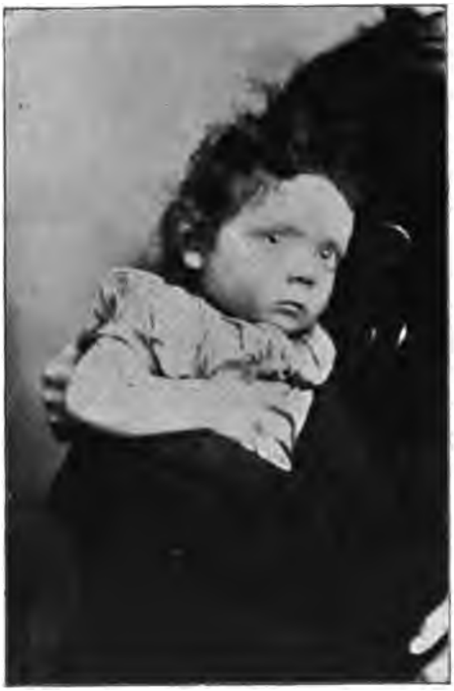


I. Pleuro-pneumonia. Fifth day.

Eyebrows oblique from the action of the corrugator supercilii on each side along with that of the central bundle of the frontalis.

Nostrils dilated and working. Angles of mouth lowered, and lips slightly parted so as to admit a little air during the labored breathing.

Expression of face being that of suffering, modified by the desire not to cry because of the pain which a long breath would cause.



II. Pleuro-pneumonia. After crisis.

II. Same child, nine days later, after the temperature has been normal for more than a week.

Thinner, but otherwise well, comfortable and noticing.

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A CASE OF MIDDLE EAR SUPPURATION, MASTOIDITIS; DEATH FROM RUPTURE OF THE ŒSOPHAGUS.

By **Arthur H. Cheatle**, F.R.C.S.
Assistant Surgeon to the Royal Ear Hospital and Aural Department of King's College Hospital, London.

THE following case was under the care of Professor Urban Pritchard in King's College Hospital; in his unavoidable absence the operation on the ear was performed by myself I am indebted to him for permission to publish the case.

A boy aged 4 years was admitted into the hospital on December the 23d, 1895, with the history, that on coming home from school on December 16th, he complained of feeling generally ill; on the 17th a discharge was noticed for the first time coming from the right ear; on the 18th was seen by a doctor who ordered syringing. Shivering was noticed in the evening of the same day. On the 19th and following three days became much worse, "brain fever" setting in.

On admission he was anxious looking and complained of pain in the right ear, which was discharging a large amount of mucopurulent non-offensive pus. Tenderness on pressure was present behind the ear, but no redness or swelling. On cleaning out the meatus, the membrane was seen to be congested and bulging, with a pin's head perforation below the handle of the malleus, the discharge pulsating as it came through. No bulging of the posterior superior deep meatal walls. The head held stiffly. No swelling in the neck along the course of the internal jugular vein. The boy was quite sensible, answering questions intelligently. Temperature 103. Lungs, heart and abdomen normal. Chloroform was at once given and the membrane freely incised behind the handle of the malleus.

December 24th. No better. Temperature up irregularly 106° at 6 p. m. No shivering or convulsions. Discharging freely. An ill-defined soft spot with doubtful fluctuation found by Dr. Pritchard behind the ear at the attachment of the auricle, but no œdema or redness. Dr. Pritchard ordered immediate operation if anything definite was found.

December 25th. Temperature still high, squinting with twitching of the hands and tendency to coma noticed in the evening.

December 26th. Fluctuation detected behind the ear in the position of the soft spot noticed on the 24th. Under chloroform, a free incision was made behind the ear evacuating half a drachm of thick pus, the periosteum stripped off and some pus found lying around the apex of the mastoid process. The antrum was then opened without discovering anything definite, but on chiseling into the mastoid process, the bone was found to be dry and discolored, and the mastoid process was then entirely removed. The lateral sinus exposed freely, and opposite the affected bone a small crateriform ulcer was found in its wall with some surrounding deposit of lymph. During the operation the sinus gave way at the point of ulceration. No sign of thrombosis seen. The sinus was then plugged with double cyanide gauze to prevent the passage of blood through the affected area.

December 27th. Child was worse. Temperature reached 105° at 2 a. m. In the afternoon he was semi-unconscious and restless, but quieter after dressing. No trouble in taking food.

December 28. Died somewhat suddenly at 1 a. m.

At the post-mortem made by Professor Norman Dalton, all diseased bone was found to have been removed at the site of operation, there was no extension of meningitis and the sinus at the site of plugging contained a healthy clot.

On opening the thorax numerous small subpleural hœmorrhages were seen, but no infarctions. On removing the lungs a large recent hœmorrhage was found in the posterior mediastinum, which had stripped up the parietal pleura largely on the left side and slightly on the right. On searching for a cause, an irregular opening with no trace of pus was found in the œsophagus at the level of the tracheal bifurcation. The lower part of the œsophagus was soft and torn extremely easily. Dark colored fluid blood was found in the stomach, but not in the small intestine. The upper air and food passages were normal. No foreign body was found. The remaining organs were normal.

The case is a peculiar one and difficult of explanation. The idea of traumatism, of course, occurred, but no history could be obtained and no foreign body could be found.

The rapidity of the illness and bone implication points to a local infection of extreme virulency ; taking this into consideration, together with the presence of the small subpleural hœmorrhages and softened condition of the œsophagus, it is most probable that an acute infective œsophagitis was set up which led to the rupture of a vessel causing rupture of the wall both into the mediastinum and œsophageal passage.

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PRACTICAL NOTES.

Oil of Amber in Whooping Cough.—Murrell has used oil of amber for some years, both internally and externally, in the treatment of whooping cough. He orders a teaspoonful to be rubbed in along the course of the spine night and morning. For internal administration from three to ten drops may be taken every four hours on a piece of sugar or on a crumb of bread, but this mode of administration presents some difficulty in the case of children. The following mixture is preferable:

Oil of amber,	10 minims.
Powdered gum acacia,	1 drachm.
Syrup of orange flower,	2 drachms.
Oil of anise,	3 minims.
Water to,	1 ounce.

The difficulty is in covering the somewhat disagreeable taste of the amber oil.

For a liniment the following formula is useful:

Oil of amber,	6 drachms.
Oil of rosemary,	1 drachm.
Oil of origanum,	1 drachm.
Oil of turpentine,	1 ounce.
Linseed oil to,	4 ounces.

Amber oil is a common article of commerce, and more extensive trials will show that it is a useful therapeutic agent.—*Clinical Sketches, 1896, iii., 35.*

Warts and Their Treatment.—Treatment must be thorough. Care is to be exercised to prevent pain at the time of operation. Mild caustics often give better results than the most active, and especially must this choice be made when the patient is a child. *Salicylic acid* has proved of better service than any other drug, because in softening the tissues it does not give pain. His plan is to use an ointment of 15 per cent. of salicylic acid in lanolin or petrolatum, and to have it applied freely for at least three days, when he removes the dressings and cures the part, removing all traces of the wart. Immediately after this operation, the application of the ointment is continued for at least a week, and there is no return of the wart. Nitric acid, acetic acid, hydrochloric acid and chromic acid, in mild solutions, have been recommended for this work, but, as a rule, pain accompanies their action. A most simple plan has been in use for ages as a home remedy; a sulphur-headed match is dipped in water and applied to the part three or four times a day, and it has been seen that the lesion becomes smaller each day.—CANTRELL, *Philadelphia Polyclinic, 1896, v, 92.*

Liniment for Relief of Flatulent Colic.—

Compound soap liniment,	2½ ounces.
Compound camphor liniment,	2½ ounces.
Oil turpentine,	2 ounces.
Castile soap,	2 drachms.
Oil cajuput,	1 drachm.
Oil lemon,	1 drachm.

—*Bull. Pharm., 1896, x, 134.*

Ice Water Without Ice.—Here is a wrinkle, how to get ice-cold water in places where there is no ice. Wrap a porus jug in wet flannel; wrap it all around, leaving no place exposed to the air; place it, filled with water, in an open window exposed to all the air there is. Keep the flannel wet. In an hour the contents of that jug will be as cold as if they had been iced.—*Confectioners' Journal, Bul. Pharm., 1896, x, 133.*

Ringworm Lotion.—

Aromatic sulphuric acid,
Spirit nitrous ether,
Creosote, of each equal parts.
M. Apply once a day with a feather until well.

—*Bull. Pharm., 1896, x, 134.*

A Test for Albumin in the Urine.—Alex. C. Ewing recommends the following simple way of applying an old test. It is this: Draw up into a small glass pipette or tube about an inch of the urine, let the finger remain tightly over the top and insert the pipette into nitric acid and draw up under the urine about the same quantity of acid, when if even a trace of true albumin be present there will appear a beautiful line of demarcation between the acid and urine. This test is as accurate as it is simple, and, besides, is decidedly economical and far less trouble than all others.—*Med. Rec., 1896, xlix, 337.*

Insects Used in Therapeutics.—At the present day the number of kinds of insects used in medicine is very small, the cochineal, cantharides, *blatta orientalis* about comprising the list. But in former days, and down even to the end of the eighteenth century, a large number of species was used. In this, as in every other department of the *armamentarium medicum*, in popular medicine at least, the nastier the substance, the more potent the remedy. Thus, wood-lice were used to cure indigestion, or, to put it in the lingo of that day, were potent to "dissolve the mucilaginous tartar of the body," "open obstructions of the viscera," etc. When it came to treat epilepsy, the *grand mal*, something more powerful was necessary, so we are not surprised to find the old physicians recommending *bed-bugs* as an almost infallible remedy. Aristophanes, Aristotle, Pliny and Dioscorides, all maintain the efficacy of these disgusting creatures in quartan fever. Pliny says that seven bed-bugs swallowed at the beginning of an attack will certainly work a cure.—*Nat. Druggist, 1896, xxvi, 73.*

Animals and Disease.—President Haynes of the New York Society for the Prevention of Cruelty to Animals called attention, in a recent address, to the fact that nearly all stray animals are diseased and therefore a continual danger to healthy animals. "But that is not the only danger," he adds. "Human diseases are undoubtedly propagated in the same way. In cases of diphtheria, smallpox, scarlet fever, measles, and diseases of the skin in general, no disinfection of houses or rooms can be effectual if dogs and cats which inhabit them are not likewise disinfected ; and in the opinion of many competent physicians, the spread of contagious diseases must be in many instances attributed to this cause."

Suppurative Parotitis.—Dr. Barjon, of Lyons, has just published a study on suppurative parotitis, a disease which is known to be quite rare. Ordinary mumps scarcely ever leads to the formation of abscess. The author, writing in the *Gazette Médicale de Paris*, No. 43, 1895, states that from his own observations, as well as from a careful examination of the literature of the subject, he is convinced that a secondary infection is needed to produce suppuration after mumps. He also asserts that bacteriological examination has shown the specific microbe of mumps to be non-pyogenic. The only practical suggestion that can be made from Barjon's observations is to the effect that buccal antisepsis in mumps will positively prevent suppuration of the parotid glands.—*Med. Rec., 1896, xlix, 339.*

Editorials.

CONGENITAL LUXATION OF THE HIP.

RECENT advances in our knowledge of this interesting, but hitherto neglected affection, are deserving of notice· Brodhurst distinguishes three types of cases: those due to trauma before birth, those due to trauma at birth, and those due to arrest of development. The dislocation may be in various directions, but is usually on the dorsum. He believes that the traumatic cases, in which the acetabulum remains of normal size for several years, are much the more numerous, and instances cases of infants of five and fifteen months, in which a one-sided dislocation was easily and permanently reduced. In cases between three or four and twelve years, if the acetabulum is shallow, and the hip not firm, he enlarges the socket subcutaneously by means of a gouge, and replaces the head of the femur. Paci, of Turin, reports many successful cases up to the age of fourteen and fifteen, from replacement by means of manipulations (resembling those of Bigelow), and appropriate after treatment. The permanence and even the reality of these replacements is doubted by most operative surgeons who have given special attention to this subject; and these also favor the view that the cases due to congenital defect are the more numerous. Lannelongue reports an autopsy on an infant ten days old, showing the left acetabulum narrowed, flattened and incapable of containing the head of the femur, which was of normal size; as the baby had never walked there was no displacement. Operators are agreed in finding the most serious obstacle to reduction in the anterior bands of the capsule, and therefore favor the anterior incision for bloody replacement. With preliminary extension no tenotomies are necessary. Lorenz reports a series of one hundred cases treated in this manner without a failure. It is conceded, however, that the operation is one of unusual difficulty, and failures have been numerous. Broca reports twenty-eight operations on twenty-five patients with four deaths from sepsis, one from tuberculosis, and two failures. Cases showing very satisfactory results from operative replacement have recently been exhibited at the New York Academy of Medicine by Drs. Gibney and Whitman, but the operation in America is still in its infancy. Hoffa, who first brought operative replacement prominently forward, places the most favorable age between two and eight years. In children who have not yet walked, he says that orthopedic treatment will be successful. What remains clear from all the evidence is the crucial importance of detecting these cases in infancy, when much can be accomplished without risk by the improved methods of manual replacement and retention.

HENRY LING TAYLOR, M. D., New York.

"Dead Air" Treatment of Diphtheria.—T. B. HILL writes (*Med. News, 1896, lxviii, 216*) to suggest that cases of nasal diphtheria be treated with the "dead air" method by plugging the anterior nares with cotton, thus limiting the production of the baneful toxin in that inaccessible region by shutting off the necessary *current* of air.

For Erysipelas.—

℞ Ichthyol;
Glycerol āā. ℥ ss.

M. S. External use. J. ABBOTT CANTRELL, *Phila. Polycl., 1895, iv, 245.*

Malted Food for Infants.—Practice appears to vary considerably with regard to the amount of malt in prepared infant's foods, as little as 5 per cent. being used in some cases. Probably the following formula, or some modification of it, may serve your purpose:

Baked wheat flour,	10 oz.
Ground malt,	2 oz.
Sugar of milk	4 oz.

There is no necessity to add phosphates. A more palatable food can be prepared by adding desiccated milk, but this, of course, is not essential, as fresh milk is always added before use. Dry all the ingredients before mixing, by spreading on large flat dishes in a moderately cool oven.—*Pharm. Journ., 1896, iv, 199.*

Society Report.

NEW YORK ACADEMY OF MEDICINE.

General Meeting, March 5, 1896.

PNEUMONIA AS A COMPLICATION OF DIPHTHERIA IN CHILDREN.

DR. HENRY W. BERG presented a paper on this subject. He said that so many deaths in the Willard Parker Hospital had been due to broncho-pneumonia complicating diphtheria that the otherwise brilliant results from the antitoxin had been diminished. Dr. Brannan, in a recent paper, had stated that in that hospital more than fifty-four per cent. of the mortality had been due during the past year to broncho-pneumonia. It had been found that pneumonia might complicate diphtheria at any stage of the disease ; indeed, as long as the Loeffler bacilli were present. This pneumonia arose principally in two ways, viz.: (1) By direct continuity, minute fragments of membrane being drawn down into the smallest bronchi ; and (2) by infection with other germs than the diphtheria bacilli, chiefly the streptococci. Not only was broncho-pneumonia frequently present in diphtheria, but there might be a lobar pneumonia, a gangrene of the lung, or merely a congestion of the lung. Although the records of the autopsies made in the hospital did not show that any lobar pneumonias had occurred there during the past year, he felt confident that he had on several occasions observed the clinical evidence of a lobar pneumonia. It had been found that the pneumonias complicating diphtheria were usually due to streptococci and Loeffler bacilli, and that this mixed infection had the effect of markedly increasing the virulence of the diphtheria bacillus.

The two most important symptoms indicative of the onset of pneumonia in the course of diphtheria are a sudden and sharp rise of temperature, and an unusual rapidity of the respirations. To this might be added the occurrence of fine crepitation on deep inspiration—a pathognomonic physical sign. The physical signs would usually enable one who had steadily followed a case to determine whether or not the pneumonia were the result of direct extension, or whether the pneumonic process was in the form of isolated patches. It was important to make this distinction, for in the former case the prognosis was exceedingly bad, whereas in the latter it was decidedly better. The prognosis was also modified by the character of the individual case of diphtheria, the stage of the disease at which this complication arose, and whether or not the case had been operated upon.

The speaker said that it seemed probable that this great frequency of pneumonia in hospital practice was due to a contagious element ; and in any case, as the pneumonia was due to bacterial infection, the children having this complication should be separated from other children having diphtheria without pneumonia. It was especially important that intubation and tracheotomy cases should be kept apart from those suffering with diphtheria complicated with broncho-pneumonia. The room or ward should, of course, be well ventilated, and the temperature of the room maintained at about 70° F. The cold-pack was his preference among the various antipyretic measures, for it not only served to reduce the temperature, where this was required, but it at the same time stimulated the patient. These patients should receive extra doses of diphtheria antitoxin. If the new anti-streptococcus serum proved equal to the claims made for it, then it would be of service. in preventing such complications of diphtheria.

DR. HERMANN M. BIGGS said that with the exception of lobar pneumonias, which might be due to pneumococcus infection, pneumonia was the result of infection with various organisms. An important factor in its production in cases of diphtheria was the lowered vital resistance. Its more frequent occurrence in hospital than in private practice he ascribed to "hospitalism," which acted as an additional depressant. It followed, therefore, that while isolation might be desirable, it was not an essential. He was decidedly opposed to the common practice of charging the sick-room with steam laden with various antiseptic vapors, not only because he considered such measures useless, but because, in his opinion, they were decidedly harmful. High temperatures might, with advantage, be reduced by the application of cold in all cases except where collapse was present. It was useful even in cases of acute nephritis. The ordinary hot poultices were an abomination, although "ice-poultices," made of ice, stitched up in cheesecloth, were beneficial.

DR. W. H. PARK said that he was not yet convinced that pneumonia developed in the hospital as the result of the infection of one patient by another ; certainly he had never been able to find streptococci in cultures taken from various parts of the wards. He was doubtful as to the results that were likely to accrue from the use of the anti-streptococcus serum. It had seemed to him that in many of the cases occurring in the Willard Parker Hospital the diphtheria had been the complication, and the pneumonia the original disease. Referring to the hospital records, he then endeavored to show that the frequency of pneumonia had diminished since the temperature of the wards had been kept at 70° instead of 80° F. He was unable to understand how Dr. Winters could claim that the frequency of pneumonia in this hospital as a complication of diphtheria was due to the use of diphtheria antitoxin, for this would presuppose that the pneumonia was not directly due to germ infection, there being no germs in antitoxin. It was naturally a matter of considerable difficulty to diagnosticate a pneumonia at the beginning of laryngeal diphtheria with stenosis, and he felt reasonably sure that in several recent cases the children had been suffering from broncho-pneumonia at the time of their admission to the hospital.

Dr. J. W. Brannan said that the occurrence of pneumonia as a complication of diphtheria had been so frequent in the Willard Parker Hospital during the past two years, and especially in the year just past, that he had given it special study. As a result he had come to the conclusion that this pneumonia had developed in those who had been saved by the use of antitoxin. He believed this, because two years ago the records showed that sepsis and laryngeal stenosis had each been responsible for about thirty per cent. of the deaths, while last year these two causes combined had accounted for only about twenty-five per cent. of the mortality. Three important measures had been recently taken in this hospital with a view to the better management of these cases. In the first place, there was a more liberal provision of air space ; secondly, the wards were kept at a lower temperature ; and, thirdly, the plan suggested by Dr. W. W. Seymour, of Troy, had been adopted with a view to preventing the drainage of fluids down into the lungs. This consisted in elevating the foot of the bed, and so securing drainage towards the mouth by the action of gravity. It had not proved very difficult to keep the children in this position.

Dr. W. P. Northrup described some experiments that Dr. O'Dwyer had undertaken with him at the Foundling Asylum with a view to determining the probable danger of *schluck pneumonie* from feeding patients wearing the present form of intubation tube. Children who were near the point of death had been fed with milk in which lampblack had been incorporated. At the autopsies the lampblack and the milk were never found below the lower end of the tube. Post-mortem studies made it clear that pneumonia in children under two years of age was *anatomically* a broncho-pneumonia, i. e., a large portion of the lesion was located in the bronchi.

He believed theoretically in the value of Dr. Seymour's suggestion about securing drainage by means of gravity, but in practice in the asylum it had been found difficult to keep them in the desired position of inversion. He would like to say one word on behalf of the much-abused poultice, and that was, that it was not the occasional application of a hot poultice that was deleterious, but its continued use. He had been unable as yet to entirely dispense with the use of the poultice, as it was a source of much comfort to the patient.

Dr. William Watkins Seymour, of Troy, said that since he had adopted the plan of elevating the foot of the bed in cases in which he had performed intubation or tracheotomy, his results had been far superior to what they had been previously; and in the case of one of his own children, he would be willing that the child should be kept on a table adapted for maintaining the Trendelenburg position. He had made free use of the hot jacket or poultice in his cases.

Dr. Andrew H. Smith said that as the usual mode of death in cases of broncho-pneumonia was by exhaustion of the right ventricle, it was evident that measures which would relieve the obstruction in the pulmonary circulation were all-important. To that end, the physician should see that the sick room was kept well ventilated, and that inhalations of oxygen were given from time to time, for when the blood was imperfectly aerated, it would circulate with difficulty through the lungs. The right heart could be still further relieved by the administration of nitro-glycerine and similar agents which had the power to dilate the blood vessels. He felt sure that the very common practice of prescribing digitalis in cases of pneumonia had resulted in many deaths.

Dr. A. Rose said that a better method of accomplishing the same purpose was by giving enemata of carbonic acid, for in this way there would be established an increased interchange of oxygen in the pulmonary alveoli. The profession had become prejudiced against this method of treatment—which was really a very useful one—because the results of Bergeon's treatment of consumption by the rectal use of carbonic acid had been disappointing.

* * *

NOTES ON TREATMENT.

ACUTE BRONCHITIS IN CHILDREN.

It is usually wise to begin the treatment with a laxative of castor oil or calomel. During the first twelve or twenty-four hours an emetic in conjunction with a warm bath may do good.

℞ Powdered ipecac, gr. i to gr. ii ;
Syrup of ipecac, ℥ i.

Mix. Sig. A teaspoonful every ten minutes until the desired effect is produced.—PERRIER.

Counter-irritation over the chest is usually indicated, with a thin mustard plaster, camphorated oil, oil and turpentine, or the following :

℞ Oil of cloves, ʒ ii ;
Camphorated oil, ℥ iv.

Mix. Sig. For external use.—J. LEWIS SMITH.

Warm drinks should be given, particularly hot milk, and, if the fever is high, one or two grains of quinine may be given in a little coffee or aromatic syrup of yerba santa. The air of the room must be kept fresh, and moderately warm and moist. The vapor of turpentine is often beneficial.

Flaxseed poultices covered with oil-silk are useful, especially for the relief of pain ; and cold compresses are useful, not only to reduce the fever, but as a stimulant, which causes deep inspirations.

℞ Mist. Glycyrrh. Co., ℥ iv.

Sig. Half a teaspoonful every two (2) hours to a child of three years.

℞ Syr. ipecac,
Spts. aether. nitros., aā ʒ ii ;
Ol. ricini, ʒ iii ;
Syr. bal. tolut., ℥ i.

Misce. Dose : Half a teaspoonful to one teaspoonful, every second hour, for the age of one to two years.—J. LEWIS SMITH.

℞ Ammonii chloridi,	ʒ i ;
Syr. bal. tolut.,	℥ ii ;

Mix Dose: At the age of three months, fifteen drops; at six months, thirty drops in water.

℞ Vini ipecacuanhae,	♏ v ;
Liq. ammonii acetatis,	♏ x ;
Glycerini,	♏ xv ;
Aqam florae aurantii,	*ad* ʒ i ;

Misce. Ft. haustus.

Sig. For an infant, to be taken every four hours.—EUSTACE SMITH.

An opiate affords marked relief from the annoyance of the cough, especially at night.

℞ Tinct. opii camph.,	ʒ i-iv ;
Syrup tolutani,	℥ i ;
Aquæ,	*ad* ℥ ii ss.

Mix. Sig. Shake and take one teaspoonful.—F. GORDON MORRILL.

℞ Lig. opii composit,	gtt. x ;
Potas. bromidi,	ʒ i ;
Syr. rubi idaei (raspberry),	℥ i ;
Aquæ,	℥ i ss.

Misce. Sig. One teaspoonful when needed for restlessness and loss of sleep from cough.—J. LEWIS SMITH.

When the mucous flow has become well established, any of the following mixtures may be prescribed :

℞ Tinct. scillae,	♏ xx ;
Syrup tolutani,	
Syrup. pruni Virgin.,	aā ℥ ss ;
Aquæ,	*ad* ℥ ii ss.

Misce. Sig. Shake and take one teaspoonful for a child one year old.—F. GORDON MORRILL.

℞ Ammonii carb.,	gr. v-x ;
Tinct. scillae,	♏ xxv ;
Syrup. senegae,	℥ ss ;
Syrup. pruni Virgin.,	℥ iii.

Misce. Sig. Shake and take one teaspoonful three or four times a day, for a child one year old.—F. GORDON MORRILL.

℞ Tinct. veratri viridis, ♏ xii;
Syr. scillae composit, ʒ ii;
Syr. balami tolutani, ʒ xiv.

Misce. Sig. A teaspoonful every two or three hours to a child five years old.

As the disease progresses, if bronchial secretion becomes very profuse, one of the following prescriptions may be used:

℞ Oxide of antimony, gr. ss;
Syrup of senega, ʒ i;
Syrup of acacia, ℥ ii.

Mix. Sig. A teaspoonful every two hours.—PERRIER.

℞ Terpine hydrate, gr. ii-iv;
Brandy, ʒ ii;
Syrup of cinchona, ʒ ss;
Syrup of orange, ℥ ii.

Mix. Sig. A teaspoonful every two hours.—PERRIER.

The coal-tar antipyretics often have a marked effect in diminishing the amount of secretion, lessening the severity and frequency of the cough and relieving the pain.

℞ Phenacetin, gr. xii-xxiv;
Caffein, gr. i-ii:
Mix. Div. in chart. No. xii (12).

Sig. Give one powder every four (4) hours.—W. S. CHRISTOPHER.

℞ Phenocoll, gr. xv-xxx;
Camph. monobromat, gr. ii;
Caffein. citratis, gr. ii;
Mix. Div. in chart No. xii (12).

Sig. One powder every four (4) hours. — DILLON BROWN.

Again, it must be remembered that certain cases of bronchitis may be of indirect origin, depending upon some affection of the heart; of the stomach; of the liver and even of the kidneys; of the skin, as in erysipelas; or it may be due to typhoid fever, or measles, or to the elimination of certain medicinal substances; and finally it may be of diathetic origin, as gout or rheumatism.

℞ Tinct. digitalis,	♏ xx
Tinct. conii,	ʒ i
Pulv. ipecac.,	gr. i-ii;
Oxymel. scillae,	℥ i;
Muc. acaciae,	℥ iii ss.

Misce. Sig. A teaspoonful every three (3) hours, when the bronchitis is associated with disease of the heart.—FERRAND.

℞ Tinct. nucis vomicæ,	
Tinct. digitalis,	āā. ʒ ss-i;
Tinct. cardamomi comp.,	*ad* ℥ ii.

Mix. Sig. A teaspoonful in water four (4) times a day, in cases following upon influenza.—THOMAS GRAINGER STEWART.

℞ Sodii salicylatis,	
Potassii bicarbonatis,	āā. ʒ i;
Syrupi tolutani,	℥ ss;
Aquæ anisi,	*ad* ℥ vi.

Mix. Sig. A tablespoonful in water four (4) times a day in the cases depending upon a rheumatic diathesis.

℞ Vini colchici,	ʒ i;
Vini antimonialis,	ʒ ss;
Potassii bicarbonatis,	ʒ i ss;
Aquæ destillatæ,	*ad.* ℥ vi.

Mix. Sig. A tablespoonful in water four (4) times a day in cases depending upon a gouty diathesis.—THOMAS GRAINGER STEWART.

℞ Tinct. lobeliæ, aethereæ,	ʒ ii;
Spts. chloroformi,	ʒ ii;
Aquæ camphoræ,	*ad* ℥ vi.

Mix. Sig. A tablespoonful every three or four hours in spasmodic cases.

In both asthmatic and dyspnoeic attacks the inhalation of oxygen gas is valuable, but it must always be diluted with air before it enters the lungs, and it must be warmed by passing through tubes lying in warm water. Dry cupping over the back of the chest or a few leeches over the lateral parts of the chest may be extremely beneficial.

Abstracts.

THE ADMINISTRATION OF QUININE TO INFANTS.

José E. Ferrán (*Archivos de la Policlinica, Havana, January, 1896*) writes concerning the inconveniences of giving quinine to infants under two years of age, and says the drug should never be given to very young children except for the cure of malaria. In 20 cases in which he gave it complete anorexia, threatening life from inanition, ensued in 12. He has never had much success from frictions with quinine nor with rectal injections. So-called sweet quinine contains very little of the drug, and quinine chocolate, useful for older children, cannot be given to very young infants, as the chocolate may cause intestinal cramps. The best of the salts of quinine for internal use in the case of infants is the dihydrochlorate.

THE DISEASES OF SCHOOL CHILDREN IN RELATION TO THEIR PHYSICAL DEVELOPMENT.

A. J. Bogolovsky (*Vestnik Obschchestbennoi Gigieny Sudebnoi i Prakticheskoi Meditsiny, Nos. 2-6, 1895*) has made a series of careful examinations of children in the primary and intermediate schools of Yalta. These examinations extended over a number of years, and 1,106 children (648 boys and 458 girls) furnishing the material for these studies. All cases of disease occurring among these children were divided into two groups: 1. Those developing for the most part independently of the influence of school life, and 2, those which could be referred more directly to the conditions surrounding school children. Concerning those in the first group, which among other diseases included anaemia, chlorosis, tuberculosis, and rickets, it was found that from the seventh year, when school life begins, on an average, the number of these affections progressively increased and were in direct relation with the rate of growth of the children. Tall and rapidly growing children were more often ill than those of medium or low stature, and they were also behind the latter in general physical development. Which of these two conditions, frequent illness and corporeal weakness, was the result of the other the author was unable to say. He inclined, however, to the view that the physical weakness was the cause of the more frequent illness—a view that was supported by the fact that the greater number of cases of illness were found among children having the smallest circumference of the chest. The intermediate schools, those preparatory to the gymnasia, gave a higher percentage of sickness than the other schools. This was, Dr. Bogolovsky believed, by reason of the weaker corporeal development of the youths in these schools, a disadvantage that was not overcome by the better social condition of these students as compared with those attending the primary schools.

Of the diseases of the second group those most commonly observed were caries of the teeth, habitual headache, and periodically recurrent nosebleed, while those of less general prevalence were myopia and eye-strain. Even here the great influence of the bodily development was evident, for the weaker children suffered most from the affections of this group as well as from those of the first. Most of the sufferers, again, were students in the intermediate schools, a fact which the author attributes in great part to the longer school hours and also to the longer time required for the preparation of the lessons at home.

SCURVY IN INFANTS.

Wm. Fitch Cheney (*Med. News, 1896, lxviii, 227*), after a review of the aetiology, symptoms, diagnosis, prognosis and treatment, reports the following case :

Olive N., female, aged 10 months, was first brought to the Children's Clinic of Cooper Medical College on July 31, 1895. The mother had noticed enlargement of the right thigh ; that the digestion was very poor ; that the heart seemed to beat too rapidly ; that the skin about the left eye had swelled on two occasions recently and turned darker colored, like a "black eye" ; that the baby had nose-bleed once recently, and some bleeding of the gums. The enlargement of the thigh was first noticed about three weeks previous, and had gradually increased since. The discoloration about the eye was first noticed about July 17th, and the second occurrence about July 24th. The mother reported further that the baby's appetite was poor ; that instead of sleeping, she whined and cried all night, but seemed easier in the daytime ; that the discharges from the bowels were acid and very irritating to the buttocks, generally too frequent, and always fluid, and that the disposition was always peevish and fretful. There was a history of artificial feeding from birth. Many foods had been tried in succession, none seeming to digest well. Since November, 1894, malted milk had been used continuously, with a little better result. The mother prepared this food by adding three teaspoonfuls of Horlick's malted milk to eight tablespoonfuls of water. The baby had just cut her first tooth at ten months, and had never yet made any attempt to stand on her feet. Both parents were living and well. There were three older children living, all well. One child had died of cerebral trouble, and had a history of bow-legs, straightened by operation at two years of age.

Physical examination showed that the infant was pale, poorly nourished, cachectic, the left eye protuberant; complexion fair, eyes blue, hair light, the body much emaciated. There was slight enlargement of the post-cervical glands, a marked rachitic rosary, box-shaped chest, and widely open anterior fontanel. Several small spots of ecchymosis were observed on the gum of the lower jaw on the left side. There was swelling of the right thigh from hip to knee, greatest about the middle, with slight enlargement also below the knee, in the upper third of the leg. The skin over the swelling was very tense, and no fluctuation could be made out. Some pitting of the subcutaneous tissues was observed on pressure. There was no redness of the surface or increased heat in the part, but the limb was apparently painful when handled. The infant made no effort to move the member. The greatest circumference of the right thigh was 9½ inches; of the left thigh, 7 inches. Percussion and auscultation showed heart and lungs normal.

The mother was instructed to drop the malted milk entirely, and feed the baby instead equal parts of cow's milk and oatmeal water. The cow's milk was to be allowed to stand for three or four hours, and only the cream and top milk used. The oatmeal water was to be made by boiling for one hour three teaspoonfuls of oatmeal in a quart of water. Of this mixture, four ounces were to be given every two hours. In addition, the baby was to receive one tablespoonful of fresh orange juice three times a day.

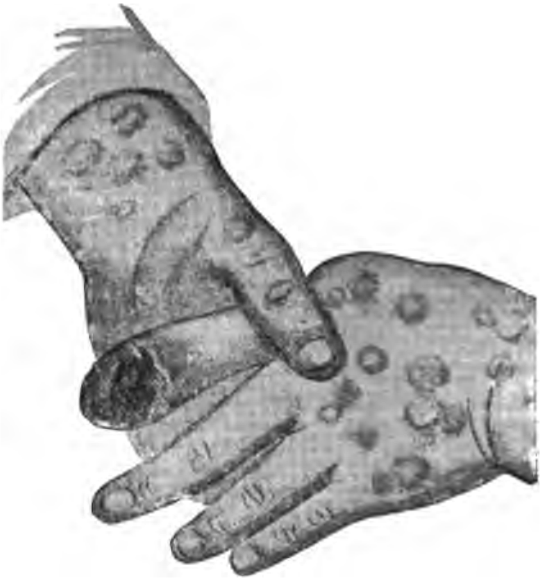
August 7th.—The infant was reported suffering from constipation, and did not seem to take her food quite so readily as formerly. The interval between feeding was therefore increased to two and a half hours and more cream added to the food. One teaspoonful of fresh beef juice was ordered with each feeding. If the bowels did not move daily, they were to be relieved by use of the soap-stick. The thigh at this visit was found to measure but 9 inches in circumference. The child made a rapid and complete recovery.

A RARE SYPHILITIC INFECTION.

The case described and figured here by W. S. Gottheil (*Clinical Recorder, 1896, i, 23*) is an example of a rare localization of the primary sore; and it certainly deserves to be classed as a case of "Syphilis of the Innocent."

A. S., aged 17 months, was seen on October 1st, and gave the following history:

At about the beginning of July, some three months ago, a sore appeared without any known cause at the side of the nail of his left fore finger. As it resisted the ordinary household remedies, and increased slowly in size, the child was taken to the dispensary in the first week in July, where a physician cauterized the sore, and prescribed an ointment. By the beginning of August spots had come out upon his body, limbs, face and hands. The finger got no better. The child ran down; it became pale and sickly, and "went back on its food."



Examination showed a pale and anaemic boy, with yellow skin and soft flabby muscles. His entire body, including his face and head, was covered with a closely-sown eruption consisting of quite large pink papules, in some places topped with a moderate quantity of silvery scales. The palms and soles were markedly affected, and here scales were thicker and semi-detached at the margins of the papules. Around the anus was a circle of moist papules. A general indolent adenopathy was present. The visible mucosae were normal; there was no alopecia.

On the baby's left forefinger was the sore for which the mother first brought him to the institution. The nail was apparently entirely gone, and its place was occupied by a fungating mass of tissue which occupied the entire dorsal surface of the distal phalanx. This fungous mass was apparently composed of hypertrophic granulation tissues; and the edges of the skin around it were reddened and indurated. The entire phalanx was as large again as it should be, and the child sought to protect it from injury by holding it with his other hand in a very characteristic manner.

The general papulo-squamous Syphiloderm was florid and at its height, as was proper at this time. On the hands and the face, where soap and water are more freely used, we have the papules alone; over the rest of the body the scales were present in varying though moderate quantity. The marked general adenopathy only confirmed the visual diagnosis.

The child slept with its mother; and sleeping with its mother in the tenement house from which this patient came means a community of soap, towels, bed-linen and dirt, which renders the infection of the child, if the mother has the disease, almost a matter of necessity. The mother admitted she had sores around the anus in January, which lasted until August, a month after the child's finger began to get sore. She was sick all over her body at the time; but she denied any general eruption or secondary symptoms. She noticed herself that during the time that she was sick her baby lost its power to play and to walk, and ran right down; for she was suckling it, as these people do, until the last possible moment, so as to avoid another pregnancy. The child improved steadily under mercurial treatment, and on March 11th of the following year it looked fat and healthy, with clear complexion and firm muscles.

A CASE OF CEREBRAL SYPHILIS IN A TEN MONTHS OLD CHILD.

Rosa Engelmann (*Chicago Med. Rec., 1895, ix, 385*) says that the rarity of this affection in so youthful a subject is the reason for its report. A mistaken diagnosis is often made, confounding it with tubercular meningitis.

The symptomatology, family history and rapid response to specific treatment confirmed the diagnosis of a basilar syphilitic lesion. From the extreme youth and consequent lack of intelligent co-operation of the patient, exact localization could not be adduced.

For the same reason and because of nystagmus and incessant rotatory movements of the head, the minute sight and optic nerve disturbances could not be demonstrated.

Choked disk of the left fungus with subsequent atrophy was shown. Involvement of the right fundus took place later. Trauma, cerebral abscess, tubercular meningitis and brain tumors, other than gummata, were excluded.

By reason of absence of polydipsia, polyuria, glycosuria, grave circulatory disturbance, meningeal symptoms, *per se*, and the involvment of only the third nerve, she concluded that a gummy tumor of the middle fossa existed. The oscillation of symptoms; their subsidence upon specific treatment; and a history of repeated abortions and still births on the part of the mother, pointed strongly to this view.

The child was well until eight and one-half months old. The examination revealed a well-developed, well-nourished babe without history or visible signs of luetic lesions except a general adenopathy. She had been having general convulsions and projectile vomiting for two weeks; bromides had partially controlled the former condition, and there were now incessant choreic like movements of the entire body, lateral cephalic rotation, nystagmus, tetanic contracture of voluntary muscles, with inversion of thumbs, carpus, tarsus, etc., marked ptosis of the left eye, choked disk of that side with a normal condition of the right fundus. There was dilation of both pupils which were nonresponsive to light.

The child was given kali iodide and mercurial inunctions. In five days she was quieter, the spasmodic twitching had lessened, the vomiting had ceased and coma was less profound.

The child improved rapidly for twelve weeks, when she was attacked by grippe, then by measles, and three weeks later she succumbed to pneumonia. No autopsy was permitted.

CONGENITAL SYPHILITIC CIRRHOSIS OF THE LIVER.

V. Tonkoff (*Vratch, Nos. 43, 44, and 45, 1895*) relates the case of a girl, eleven years old, who presented symptoms of leucæmia of apparently congenital syphilitic origin. The spleen was enlarged and the number of white blood corpuscles was increased, the lymph glands were hyperthrophied, there was pronounced anaemia, epistaxis was frequent, there was jaundice, and ascites was also present. At the post-mortem examination there were found cirrhosis of the liver, connective-tissue proliferation and evidence of blood-stasis in the spleen, and hyperæmia of the marrow of the right femur. The lymphatic glands were enlarged, but otherwise normal. The cirrhotic process in the liver was circumscribed rather than diffuse.

PERNICIOUS ANAEMIA.

R. GUAITA (*Gazzetta Medica Lombarda, January 27, 1896*) reports the case of a boy, five years old, received into the Hospital of the Order of Malta of Milan, suffering with extreme pallor of the cutaneous and mucous surfaces and much run down in health. The spleen was slightly enlarged as was also the liver, the heart sounds were scarcely audible, and there was some œdema of the lower extremities and eyelids. While under treatment in hospital petechiæ appeared on the lower extremities and forearms, and there was a slight epistaxis once. No cause could be discovered for the anaemia and no benefit followed treatment of various kinds, dietetic and medicinal, during six weeks, but the child rather grew worse. Intestinal parasites had been thought of, and santonin had been given without result. Recourse was then had, by way of experiment, to extract of male fern, with the result that a taenia solium, over three feet in length, was expelled entire. Improvement at once set in, and two months later the boy was discharged entirely recovered.

A CASE OF POISONING FROM THE EXTERNAL USE OF ACETANILID.

Richard C. Newton (*Med. Rec., 1896, xlix, 333*) reports the case of a female, aged four years, who was poisoned by the external use of acetanilid on a granulating surface on the arm, following an extensive burn.

The main symptoms were a weak and rapid pulse, cyanosis, collapse, with the patient lying perfectly motionless and helpless on her back, eyes glazed and staring, with widely dilated pupils, and cold clammy extremities.

SEPTICEMIA FOLLOWING DIPHTHERIA; TREATMENT BY STREPTOCOCCUS ANTITOXIN; RECOVERY.

J. E. KELLY reports the following interesting case (*N. Y. Med. J., 1896, lxiii, 243*):

J. B., aged twenty-one years, was first seen on August 6, 1895, when he was suffering from diphtheria. The case was typical, and ran an ordinary course until the disappearance of the false membranes. On August 20th an erysipelatous eruption appeared on his face in the vicinity of the eyes and cheek; at the same time he complained of pains and stiffness in the trunk, arms and legs. His temperature was only 99.5° F., but his pulse was in the vicinity of 150. The cranio-cervical glands, particularly on the right side, became enlarged, giving the patient the appearance of goître, and causing well-marked dyspnea. Subsequently dense, edematous swelling occurred in all the limbs, rendering passive motion impossible, and causing severe pain.

The patient was evidently suffering from streptococcous infection of the gravest type, and, not having improved, notwithstanding a week's skillful medical treatment, the writer, who saw him in consultation, recommended his removal to a hospital and the streptococcus antitoxin as a final procedure, owing to the encouragement afforded by the recent reports of Marmorek, Pozzi, Dieulafoy, Gromakowsky and others.

On August 27th he was admitted into the Gouverneur Hospital. His throat was edematous, his voice thick and his tongue swollen, there were sordes on his teeth and lips, which latter were dry and cracked, the pupils were dilated, and prostration was marked. Temperature, 100.2° F.; pulse, 134 and irregular; respiration, 32. The urine showed no albumin or sugar, but was alkaline in reaction, with a specific gravity of 1.030.

An ample supply of Gibier's streptococcus antitoxin was obtained from the New York Pasteur Institute, and at 11.45 p. m. the first injection was given, the dose being twelve cubic centimetres of antitoxin, to which was added an equal quantity of normal salt solution.

In all, twelve injections of antitoxin were given. The following abstract shows the effect of each upon temperature, pulse and respiration :

After first injection, reduction of temperature, pulse, and respiration, subsequent rise of pulse ; after second injection, reduction of pulse, subsequent rise of temperature and respiration ; after third injection, reduction of temperature, pulse, and respiration, subsequent rise of pulse and respiration ; after fourth injection, reduction of respiration, subsequent rise of temperature ; after fifth injection, reduction of temperature and respiration, subsequent rise followed by fall of temperature and respiration ; after sixth injection, subsequent rise of temperature, pulse and respiration, followed by fall of temperature to nearly normal ; after seventh injection, reduction of pulse and respiration, subsequent rise of temperature ; after eighth injection, reduction of pulse, subsequent rise of respiration, followed by rise of temperature ; after ninth injection, reduction of respiration, subsequent rise of temperature and pulse, followed by fall to normal temperature and respiration; pulse remained a little above normal; later there were slight variations in temperature, pulse and respiration; after tenth injection, subsequent rise of temperature and pulse, followed by fall of temperature; after eleventh injection, subsequent rise of temperature, pulse and respiration, followed by fall of temperature; after twelfth injection, reduction of temperature, pulse and respiration.

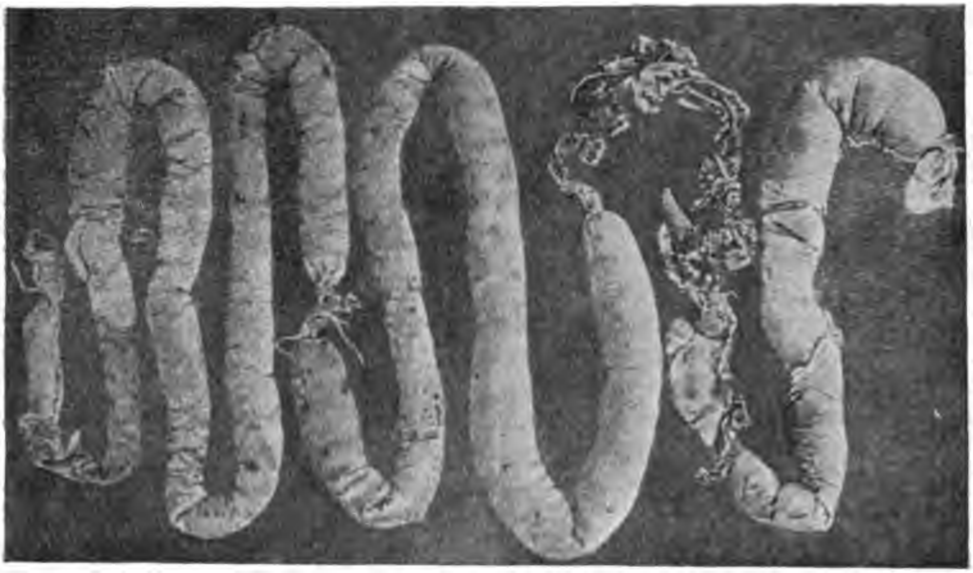
There were subsequent slight variations of temperature and pulse, the latter continuing a little accelerated when the patient was discharged from the hospital.

Thus it will be seen that five injections were followed by a fall of temperature, six by a decrease in the rapidity of the pulse, and seven by a slowing of the respiration. After five other injections the temperature also fell after a slight rise.

As is well known, however, the temperature, pulse and respiration ratios are not preserved in sepsis, and the above records, while interesting, do not fully represent the effect of the treatment on the patient. When it was determined to use the streptococcus antitoxin, it was as a last resort, owing to the hopeless condition of the patient when regarded from the standpoint of previous experience. Within a few hours after the first injection a reaction appeared, which progressed until convalescence was complete. For this case a hundred and fifty cubic centimetres of streptococcus antitoxic serum were administered without the production of any undesirable effects. This serum was procured from a horse which received by subcutaneous and intravenous injections nearly two thousand cubic centimetres of intensely virulent cultures of streptococcus within a period of eight months. Four weeks were allowed to elapse after the last injection before the horse was bled.

RESECTION OF NEARLY ELEVEN FEET OF THE SMALL INTESTINE IN A BOY EIGHT YEARS OLD.

Giuseppe Ruggi (*Il Policlinico, February 1, 1896*) reports the case of a boy, 8 years old, who was struck on the abdomen by the car of a large swing containing four people. He was thrown about forty feet and landed in a ditch full of water. He seemed to have suffered no special injury, being in his ordinary health for the following two weeks, except that there was some tenderness of the abdomen. At the end of this time, however, he began to have symptoms of intestinal obstruction. The trouble was relieved at first by purgatives, but gradually increased until surgical measures were clearly indicated. The abdomen being opened, a loop of intestine was found constricted by a bridle of the omentum. This was divided and, the gut being apparently uninjured, the wound was closed. For a few days the boy did very well, but then all the symptoms of obstruction returned in aggravated form. One week later the wound was reopened and the intestine was found to be stenosed at the point were the constricting band had been divided. The intestine was incised longitudinally for a distance of 6 or 7 centimetres, freeing the stricture, and an anastomosis was effected. For some time after this the child did well, but complained, as he had before the first operation, most bitterly of hunger, crying night and day, in spite of the fact that large amounts of food were given, in addition to rectal feeding. But in two weeks the meteorism, pain, and other signs of intestinal obstruction returned and it was determined to open once more the abdomen. A large mass of the small intestine was found agglutinated together and adherent to the abdominal wall. On attempting to break down these adhesions it seemed to be effected with comparative ease, but it was soon seen that the freed parts were deprived of their mesenteric attachments. Instead of closing the abdomen, as had been done in similar cases, Dr.



Ruggi determined to resect the injured part. He removed successively three portions of the gut, as shown in the accompanying illustration, the entire length being 3.30 metres (10 ft. 9 in.), until sound gut above and below was reached. The lower incision was 15 cm. (6 in.) from the ileo-cecal valve. The extremities of the intestine were united by silk sutures. There were no bad symptoms after the operation, and within a few days the boy was again crying for food. For three weeks, in spite of many imprudent concessions being made to him, the boy was teasing night and day for something to eat. Gradually, however, the food taken seemed to afford some nourishment, and five weeks after the last operation the child was discharged perfectly well. At the time of the report, fifteen months later, he was in perfect health.

APPENDICITIS IN CHILDREN.

Two cases recently applying to the clinic of Dr. S. Solis-Cohen, and seen, with him, by Dr. T. S. K. Morton (*Phila. Polyclinic, 1896, v, 79*), illustrate the importance of being upon the lookout for appendicitis in children, as well as the different indications for treatment in cases of different character. In the one case, a girl of 9 years old had, for nearly a year, been complaining of cramps in the abdomen, especially after walking any distance, or dancing, or jumping for a short time. The child was well nourished, and there was no evidence of tuberculosis, or of scrofula. Apart from the signs to be described later, nothing was elicited upon careful questioning and physical examination, but a history of occasional indigestion and rare diarrhea. Physical examination of the abdomen revealed tenderness over the right iliac fossa, especially concentrated at a point midway between the umbilicus and the anterior superior spine of the ilium. On careful palpation, the enlarged appendix could be rolled under the finger, without eliciting much increase of tenderness but giving rise to the sensation of cramps previously complained of, and referred to the umbilical region. No evidence of suppuration or of pericecal inflammation could be found. The temperature was not elevated. It was decided that no indication for operation existed. The child was treated by rest in bed ; the administration of mild laxatives to clear the bowel ; the institution of a diet of pancreatized milk, together with the internal use of phenyl salicylate in doses of 3 grains, three times a day, as an intestinal antiseptic. Two weeks later, the child was entirely free from pain and tenderness, and able to walk without the production of cramps. The large appendix could still be palpated, but the maneuver did not give rise to pain or cramps. It was decided to continue treatment on the lines laid down, by regulation of the diet, keeping the intestines clean, and the family physician was advised that in case there should be recurrence of the old symptoms or development of new ones indicative of acute inflammation, he should at once seek surgical counsel. It was not felt, however, that an operation, at this time, would be justifiable.

The other case was that of a girl of twelve years, with history of ill health for over a year. For the last eight days there had been occasional vomiting, constipation, and complaint of general tenderness in the abdomen. The tongue was coated, the breath somewhat fetid. The temperature was 100.2° F.; examination of the abdomen showed slight general distention. Tenderness was found to be localized toward the right iliac fossa, with one extremely sensitive point about one and a half inch internally to the anterior superior spine of the ilium. The most significant feature of the case was the fact that the muscles of the right side of the abdomen were extremely rigid; so much "on guard" indeed, that it was impossible to make satisfactory palpation or percussion of the region. On the left side the muscles were easily relaxed by manipulation. In this case the mother was advised to place the child in the hospital to be observed, in order that the possibility of enteric fever might be positively excluded, with the understanding that, in case no revision of the diagnosis was made, operation for appendicitis was to be performed on the following day. Unfortunately, the operation was not permitted, the child being taken from the hospital, and placed under the care of a physician at home. The outcome of the case is not known.

PANCREATIC CYST.

COTTERILL (*Edinburgh M. J., 1896, Feb., 747*) showed this case to the Medico-Chirurgical Society. Sarah B., aged 15 years, had suffered for twelve weeks from a sharp attack of gastric pain, accompanied by constipation and vomiting. A swelling began to show a fortnight after this, and at the date of her admission to the Wards there was a large tumor the size of a child's head in the left hypochondriac and umbilical regions, passing across the middle line to the right hypochondrium. This caused the patient a lot of dragging pain, and she was much emaciated. The exact nature of the tumor being doubtful, some of its contents were drawn off by the aspirator and examined, when the fluid was found to present several of the characters which were indicative of cyst of the pancreas. The chief interest in the case lay in the fact that the cyst was opened by a posterior incision, and not through the anterior abdominal wall, as is usually done. It was considered an advantage to attack the cyst from behind, as there it could be reached extraperitoneally, it would drain better from a posterior opening, and there would be less risk of the subsequent formation of a ventral hernia. An incision was accordingly made along the outer border of the erector spinæ, just below the twelfth rib, and a tube was inserted into the cyst, the wall of which was found to be thick and nodulated on its external surface. The wound was kept open by drainage-tube for some four months, and latterly iodine was injected occasionally, to help to cause obliterative adhesions in the interior of the cyst. It was then allowed to heal, and has remained cured since that time. During her stay in the ward she was given liquor pancreaticus with her food, and this seems to have supplied a want, as she put on nearly 3 stones in weight in six months, and is now fat and well. The posterior incision was suggested to Mr. Cotterill by a case of Mr. Cathcart's, where he had found it necessary to make a counter-opening behind in a somewhat similar case, and had found that the wound drained well from the flank. The case shown is believed to be the first, in this school at any rate, which has been deliberately attacked from behind, and there seems little doubt but that it is the safer method.

A CASE OF INTRA-UTERINE INFECTION WITH RELAPSING FEVER.

A. Mamuroffski (*Meditsinskoye Obozrenie, No. 20, 1895*) relates the case of a woman, four months pregnant, who aborted during an attack of relapsing fever. In dry preparations made from the blood of the vena cava and right ventricle of the fœtus, Obermeier's spirochætæ were found in great numbers. The author believes from this that micro-organisms may readily find their way from the capillaries of the uterine mucous membrane into the placental circulation.

CRANIECTOMY, WITH THE AFTER HISTORY OF TWO CASES.

T. Telford-Smith (*Journal of Mental Sc., 1896, January*) reports the after history of two cases of craniectomy.

The operation of craniectomy for microcephalus and idiocy has now been on its trial since 1890, and taking the cases operated on in France, in America, and in Great Britain, there are about 200 cases from which it ought to be possible to form some judgment as to the success of the operation, in so far as mental development is concerned.

The information which up to the present has been published as to the after history of the majority of these cases is meager in the extreme. We find in some cases "amelioration" or "improvement" reported, but particulars as to the kind and degree of improvement are not stated. Also in the published cases the space of time between the operation and the report is generally too short to admit of a well-founded opinion as to the results really due to craniectomy.

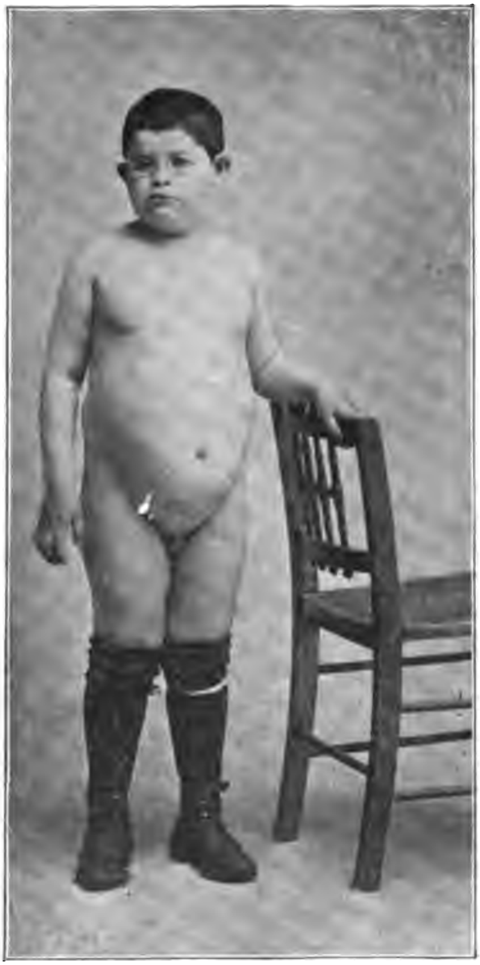
It seems time, however, to urge upon all who have had an opportunity of observing the after-results of the operation, in any cases where a sufficient time has elapsed, to publish a full and impartial account of the present condition of the patients, and to contrast it with the condition before the operation.

The weight of evidence so far is against the operation of craniectomy, as judged not only from the facts learned from an examination of microcephalic brains, microcephalic skulls, and of skulls in which the operation has been performed, but also as judged from the actual mental and physical results obtained in even those cases where all the circumstances were favorable.

LIPOMATOSIS UNIVERSALIS, WITH SYMPTOMS OF OBSCURE NERVE LESIONS; VERSUS MYXOEDEMA.

The accompanying picture (*Clin. Recorder, 1896, i, 15*) is that of a boy twelve years of age who is now in the Montefiore Home for chronic invalids. He was seen by Dr. S. H. Dessau for the first time in November, 1893, at the Mt. Sinai Hospital Dispensary, where his mother brought him for a difficulty or uncertainty in walking. This was soon found to be due, in a large measure, to defective vision, for which he received glasses, with apparently good results. It was at once observed that he was remarkably large for his age and height. He was four feet one and a half inches tall—and weighed eighty-eight and a half pounds. His mother said that he had been growing rapidly stout for three years. He now, in December, 1895, weighs one hundred and fifteen and a half pounds.

He presents the following condition : The deposit of fat over the body is firm. He has an expressionless face, apparently due to defective vision. The head is small, especially the frontal region. The hair is thick and not particularly dry ; scalp full of dandruff. His eyes are small and there is a slight amount of both lateral and horizontal nystagmus, increased on efforts at focusing for sight. His vision is poor. On attempting recognition of objects he acts as if he saw only one-half. His walk is not so uncertain as two years ago, but is more reeling in character. His movements are quick, not clumsy; there are no ataxic symptoms in walking. His memory is good, though he is of a low grade of intellect. He is very cowardly



and is amused like a much younger child. His voice is loud and speech quick, though thick in the pronounciation of certain consonants, as c, l, or t. His lips are not thick and have a slight vermillion hue. His nose is not broad. His complexion is not pale, though not ruddy. He has quite a color of the cheeks. His capillary circulation responds to the slightest irritant. His skin is smooth and soft and there is a decided tendency to sweating shown by an intertrigo on the inner side of the thighs in contact with the scrotum. The sexual organs are markedly small. Besides the nystagmus, there is a marked tremor of the arms and head on attempting muscular movement. There is also a twitching of the facial muscles, especially of the mouth. He does not appear to be unduly sensitive to cold.

His appetite is not large, but he has always had a great thirst. He passes an abundance of clear, pale urine, containing a small percentage of albumin and at times a trace of sugar. He becomes short of breath on slight exertion. His heart is weak, pulse small, 90; respiration, 34.

This boy has been seen by numerous physicians and various opinions of his condition expressed. He was, in the spring of 1894, in Dr. A. Jacobi's ward at Bellevue Hospital, where he was for six weeks given Thyroid Extract under the supposition that he had myxœdema. Delirium was produced, but no beneficial effect followed. It will be highly interesting to watch the further effect of the thyroid preparation, as the case does not by any means present a pure illustration of myxœdema. The tremor, nystagmus and thick speech are highly suggestive of pseudo-multiple sclerosis occurring in a corpulent subject, perhaps the result of a general lipomatosis.

* * *

Correspondence.

PEDIATRICS.

To the Editor of "Pediatrics."

Dear Sir.—The correspondent who writes in your issue of March 1, finding fault with the name "Pediatrics," seems to be somewhat at sea in his conception of English, Greek, and the science of pediatrics. The word "paidiatreia," which he proposes is not formed on English models, and its very sight is an abomination in the eyes of any one to whom English is the mother tongue. Furthermore, if it were adopted into our language it would not be pronounced as the Greeks pronounce it, but would become at once, following the genius of our tongue, a proparoxytone, and a Greek hearing the word would naturally suppose it to be *παιδιάτρια*, meaning a female physician whose specialty is children's diseases. Moreover, the word *παιδιατρεία* means properly the treatment of children's diseases, but pediatrics is broader than that—it means literally the whole of medical science (and not therapeutics only) in its bearings upon children, being derived from *παῖς* and *ιατρική*, the science of medicine, and not from *ιατρικόν* or *ιατρικά*, as your correspondent erroneously assumes.

Your title is well chosen, scientifically correct in its derivation, expressive, and excellent English. Keep it, and may you long prosper under it! *ΦΙΛΑΚΡΙΒΗΣ.*

Paris, March 10, 1896.

A Wonderful Horse.—Dr. Paltauf, of Vienna, has a horse of which he is very proud. The causes of pride in horseflesh are usually the superb beauty of the animal, his record in the matter of speed, his ancestry, his temper, his style, his color or his price. But none of these things have inspired the enthusiasm of the Vienna physician. His horse has beaten the record simply in the production of antitoxin units. The animal is a six-year-old gelding and strength of his serum is five hundred antitoxin units. In the last year this noble animal has produced six quarts of toxin, and, while others have saved their hundreds, this horse has saved its thousands of lives. In the civilization of the future, and perhaps in the annual New York horse show of the future, the element of antitoxin may yet be taken into consideration in testing the qualities of the horse. We should respectfully submit to those gentlemen who run future horse shows that a collection of animals labeled with their toxin-bearing capacity would form a most interesting addition to the parade of fair women which is put on view on this occasion.—*Med. Rec., 1896, xlix, 417.*

PEDIATRICS

Vol. I. MAY 1st, 1896. No. 9.

Original Articles.

RESULTS OF THYREOID TREATMENT IN SPORADIC CRETINISM.

By Frederick Peterson, M. D.,

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and

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CRETINISM or myxœdematous idiocy, since the recognition of its dependence upon non-development of or degenerative changes in the thyreoid gland, has been the subject of considerable experimental treatment with thyreoid preparations by physicians of different countries, chiefly, however, in England and America. We have not been able to find published accounts of the effects of thyreoid treatment in endemic cretinism, and the cases we have collected belong to the class known as sporadic cretinism, of which not a few examples are found in every country. There are rare cases in which the want of development or disease of the thyreoid gland during intra-uterine life is manifested to such an extent that the infants are typically myxœdematous at birth, and are either still-born or survive but a few days. More common are cases in which, while the disorder has its inception previous to birth, the progress is slow, and the child lives for some months or for several years. But the usual history of cases of sporadic cretinism is that of a normal condition for the first few years of life until about the fourth or fifth year. At this time, in the majority of cases, disease of the thyreoid gland developes and induces either slowly or rapidly, according to the degree of alteration in the gland, the mental and physical changes peculiar to the myxœdema of childhood. These changes differ from those of myxœdema in the adult because of the effects of the disorder upon the organism during its period of development. Common to both phases of myxœdema are the general effects upon nutrition, the general œdema, the thin hair, decaying teeth, anæmia, lowered bodily temperature and intellectual impairment. But in the myxœdema of childhood, the stunting of growth in all directions, bodily and mental, is extraordinarily marked.

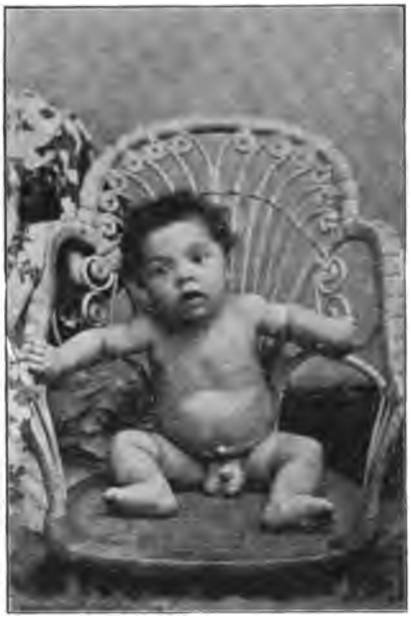

FIG. 1. Cretin, aged 18 months. Before Treatment.

A sporadic cretin once seen is ever after easily recognized by the physician. His dwarfish stature, thick limbs, short neck, lordosis, prominent abdomen, flattened and retroussé nose, thick lips, large thick tongue, open mouth, absent or imperfect teeth, face devoid of expression, coarse skin, scanty and generally reddish brown hair, anæmia, supraclavicular swellings, and frequent umbilical hernia, form a picture too distinct to be effaced from the mind. The child suffers from cold, and the temperature is found to be subnormal. On examination the thyreoid gland may be absent, or may be smaller than normal, or present a goitrous enlargement.

The authors have had seven cases under observation since the thyreoid treatment came into use. Four of these were observed at the Vanderbilt Clinic in the service of Prof. Starr and three at the Randall's Island Hospital for Idiots. The condition is, therefore, somewhat rare. One of the children at the Vanderbilt Clinic was a case of a sporadic cretinism in a negro. Of those studied at the Clinic, two were much improved by treatment, one disappeared from sight before treatment was begun, and one we can report as probably cured. This case we describe in detail as follows:

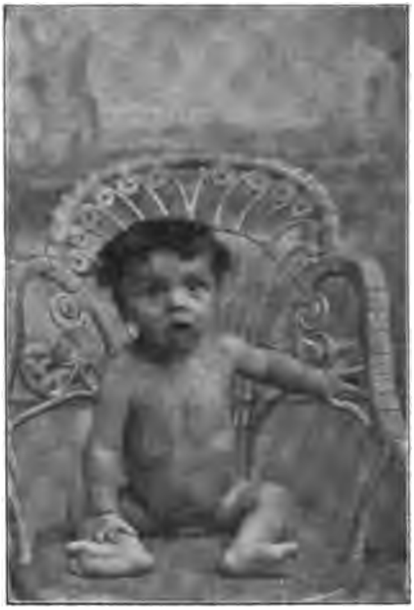

FIG. 2. Six weeks after thyreoid treatment was begun.

M. P., male child, aged 18 months, born in the United States of Hungarian Hebrew parents, was brought to the Clinic June 25th, 1895. He was the 5th of five children, the other four being normal in every respect. His hair was reddish brown and thin. He had no teeth. The lips were thick, eyelids and face heavy and puffed. There was slight swelling of the supraclavicular region. The thyreoid gland was distinguishable, but small and hard. The testicles and scrotum were long. There was umbilical hernia. It was very small for its age. Temperature 97.2° Fahr. at time of examination. Absolutely unable to sit up, stand, walk or turn over. Paid no attention to anything going on about it. Had been taught the words "papa" and "mamma," but had no knowledge of their application That was the extent of his vocabulary. The cretinous condition was perfectly distinct, though it had evidently not progressed far. The child had not been treated for its condition. The child was photographed and then put upon one grain of the dried and powdered thyreoid gland of sheep daily, which it has continued to take up to the present time (April, 1896). The second photograph was taken August 14, 1895, about six weeks after beginning

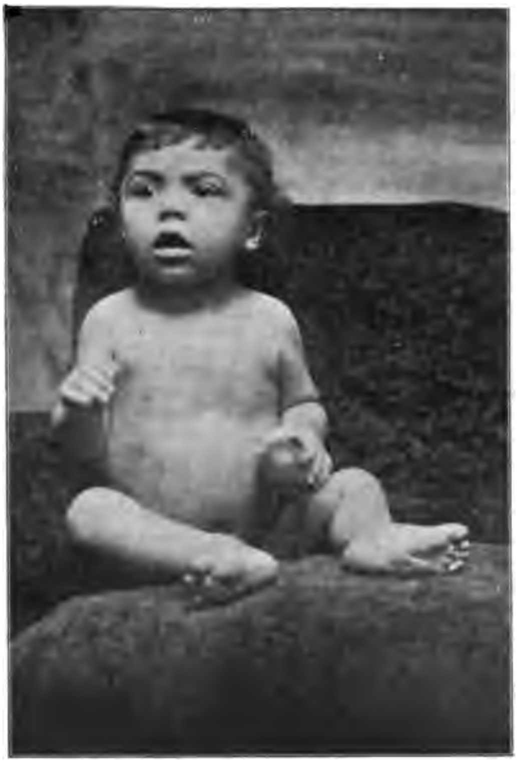

FIG. 3. Seven months after thyreoid treatment was begun.

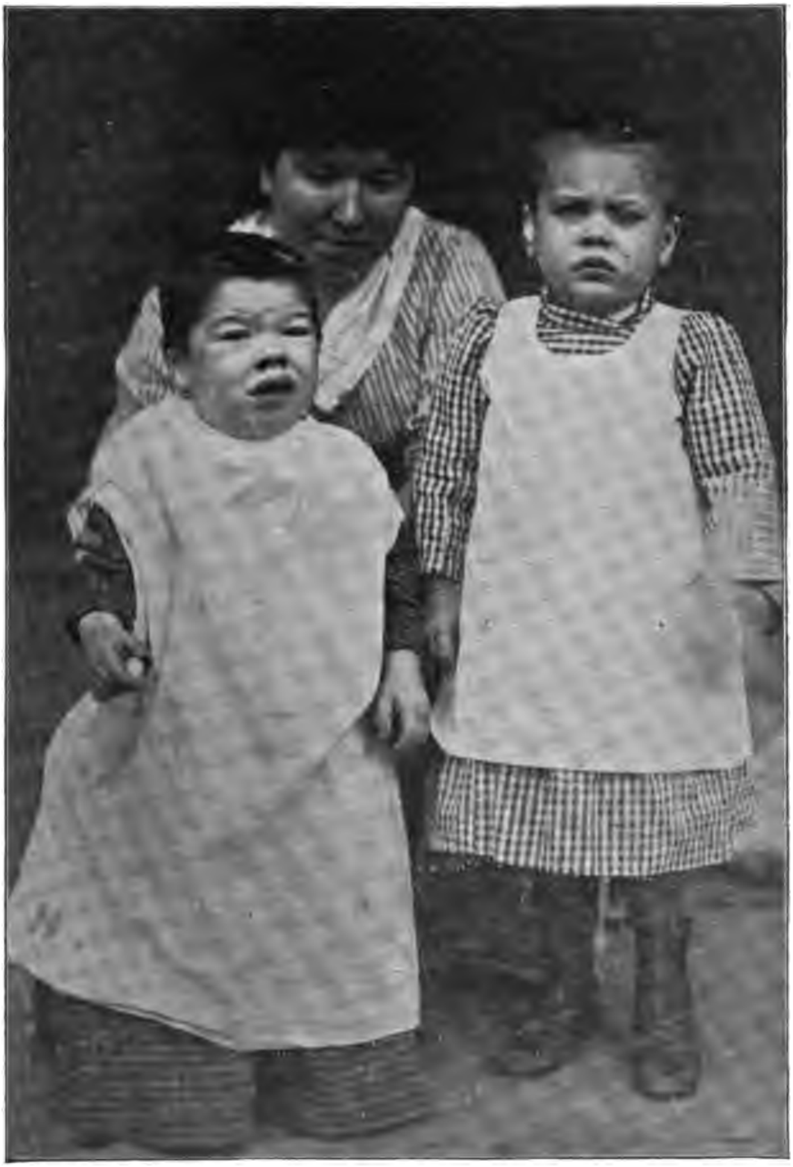

FIG. 4. Cretin, aged 15 years; and normal brother of cretin, aged 4 years. Photograph to illustrate dwarfing of stature in cretinism.

treatment. As is readily seen in the pictures, there was a marked change for the better. The child had become thinner in every respect, had begun to grow; the pendency of the scrotum was less marked; the umbilical hernia had disappeared; the hair had become thicker; two teeth had been cut. The child could sit up on the floor, and had begun to play and laugh with the other children, to understand everything said to it, and to take notice of everything going on about it. Its vocabulary had increased several words. During the past winter the child has had the measles, but has continued its remarkable improvement. The third photograph, taken Jan. 26, 1896, shows a child very intelligent and robust for its age (two years), and in respect to bodily growth, development of teeth and hair, use of language, play, etc., etc., it must now be considered as in every respect a normal child. It is proper to call the case cured, though the thyreoid extract will, no doubt, need to be continued indefinitely.

Our second case observed in the Randall's Island Hospital was a female, aged 15 years, a typical cretin in all respects. The photograph (Fig. 4) shows her dwarfed stature as she stands beside her brother, aged 4 years. Her temperature, taken daily for two weeks previous to treatment, averaged 97° Fahr. She was always cold and kept close to the stove. Her teeth were decayed, her hair thin and red. She paid little attention to her surroundings, and her vocabulary consisted of but two or three words. Treatment was begun with five grains of the dried gland, which proved too much, and it was reduced to one grain daily. Improvement was noticeable in a few days. In the course of three months she grew thinner, gained two inches in height, cut several new teeth, her hair became more abundant, she assumed an intelligent expression, noticed everything about her, played with a doll, and had increased her vocabulary to twenty-seven words. At this time treatment ceased because of changes among internes and attending physicians.

Another cretin in the Idiot Hospital on Randall's Island was so old that he was not treated systematically. The typical cretinous aspect is seen in his photograph (Fig. 5). He is a dwarf, and his age is supposed to be between sixty and eighty somewhere, as he is said to have been a Bowery newsboy forty years ago. He has thin red hair, very few teeth, is now much demented, as he barely responds to his name, and asked his age, says, "nine years." His temperature is subnormal, and he constantly hovers about the stove. Two weeks of thyreoid treatment made no perceptible impression except to improve the temperature and circulation. The age of the

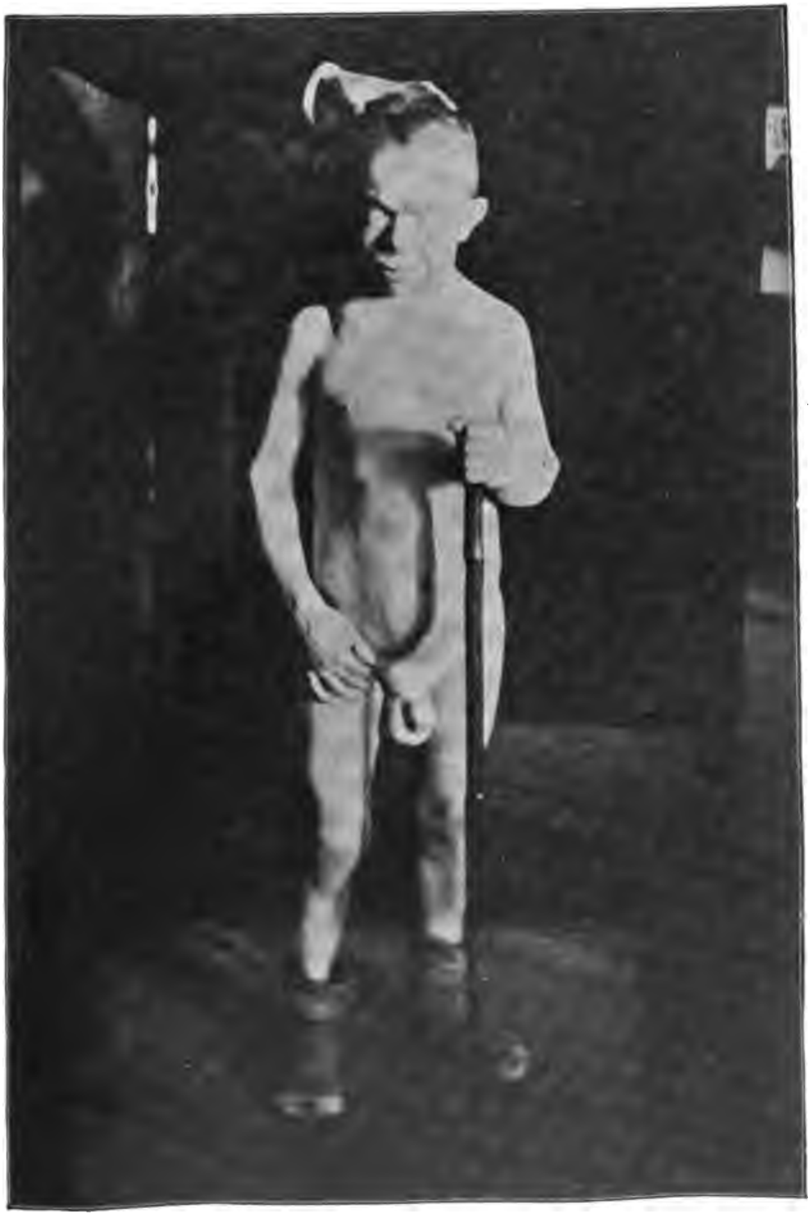

FIG 5. Cretin, aged between 60 and 80 years.

patient would imply a very slow change in the thyreoid gland. The gland is still perceptible though very small.

The cases we have seen illustrate very well the different degrees of cretinism that may be met with. The myxœdematous symptoms, depending as they do directly upon the diminution in the amount of thyreoid secretion, vary from manifestations just perceptible to the experienced eye to symptoms of the most pronounced character. It is no doubt true that there are cases which we may denominate rudimentary cretinism, in which the thyreoid secretion is diminished to so slight a degree that the real condition of some apathetic or feeble-minded and illy nourished child is not recognized. We believe that physicians should be on the lookout for such cases.

We append here a table of all cases of cretinism treated by thyreoid extract that we have been able to find :

TABLE OF PUBLISHED CASES OF CRETINISM TREATED BY THYREOID ADMINISTRATION.

Author and Reference.	Sex.	Age at Beginning of Treatment.	Duration of Disease.	Symptoms.	Duration of Treatment.	Character of Treatment.	Results.
Robin. Lyon Med., 1892. LXX., p. 405.	F.	7 yrs.	Congenital	Characteristic. Unable to walk or talk.	Not stated.	Extract, followed by implantation.	Complete change in appearance. Walks.
Carmichael. * Lancet, 1893. I., p. 580.	F.	8½ yrs.	Congenital ?	Characteristic appearance. Intelligence limited. Unable to walk or talk.	9 mos.	Hyp. inject. of extract and feeding of raw gland.	Skin became normal. Learned to walk and run. Intelligence improved.
Evans. Br. Med. Jour. 1893. I., p. 767.	M.	8 yrs.	Not stated.	Not stated.	6 weeks.	One lobe of sheep's thyreoid twice a week.	No improvement.
Hellier. * Lancet, 1893. II., p. 1117.	F.	2½ yrs.	1-2 yrs ?	Characteristic appearance. Unable to walk or talk. Idiotic.	4½ mos.	Extract.	Oedematous symptoms gone. More intelligent. Cannot walk or talk.
Lunn. Br. Med. Jour. 1893. p. 1273.	F.	26 yrs.	Not stated.	Idiotic. No other details.	Not stated.	Not stated.	Became relatively intelligent and menstruation was resumed.
Ord. * Lancet, 1893. II., p. 1113.	F.	6½ yrs.	Congenital ?	Characteristic appearance. Could not walk or talk.	8 mos.?	Had been grafted previously with temporary benefit. Raw gland & extract.	Great improvement. Learned to walk in three months. Can talk.
Ibid. *	M.	3 yrs.	Congenital ?	Could not talk. Always dwarfed and bow legged Skin dry.	8 mos.?	Raw gland, dried gland and extract.	Marked. Learned to talk. Growing rapidly.
Ibid.	M.	9 mos.	Not stated.	Typical.	——	——	Improved rapidly, but died of intercurrent diphtheria.

* Indicates that the original papers are accompanied with photographs.

AUTHOR AND REFERENCE.	SEX.	AGE AT BEGINNING OF TREATMENT.	DURATION OF DISEASE.	SYMPTOMS.	DURATION OF TREATMENT.	CHARACTER OF TREATMENT.	RESULTS.
Ibid.*	M.	9½ yrs.	In infancy.	Characteristic physically, but intelligent. Height, 34 in. Could walk.	8 mos.?	Compressed extract.	Grew 1¼ inches in four months. Improvement in other respects not so marked.
Owen. Br. Med. Jour. 1898. p. 1273.	F.	26 yrs.	In infancy	Characteristic. 40¼ inches high.	——	Tabloids.	Improvement.
Patterson. Lancet, 1898. II., p. 1116.	M.	19 mos.	12 mos?	Characteristic.	8 mos.	Extract.	Oedematous symptoms gone. Can stand. Learning to talk. Has sixteen teeth.
Vermehren. Deut. Med. Woch., 1898. p. 256.	F.	29 yrs.	24 yrs.	Characteristic.	3 weeks.	Thyreodin.	Marked improvement.
Wood. Aust. Med. J., 1898. p. 166.	F.	1 yr. 11 mos.	——	——	1 mo.	Had been grafted. Raw gland.	One month's feeding without benefit.
Rehn. Ver der XII. Cong., 1898. p. 224.	F.	4½ yrs.	Not stated.	Characteristic.	2 mos.	Extract.	Marked improvement.
Ibid.	F.	6½ yrs.	Not stated.	Characteristic.	2 mos.	Extract.	Marked improvement.
Anson. Lancet, 1894. I., p. 1063.	F.	10 yrs.	Congenital	Characteristic appearance. Could walk clumsily. Mental process slow	1 yr.	Raw gland and glycerine extract.	Oedematous symptoms gone. Intelligence improved. Grew 4 in. (For 3 yrs. previously had grown only 2 inches.)
Bramwell.* Br. Med. Jour. 1894. I., p. 6.	F.	16½ yrs.	Not stated.	Typical. Idiotic. 29½ inches high	6 mos.	Extract and tabloids.	Oedematous symptoms disappeared. More intelligent. Grew 6½ inches.
Comby. Med. Infant., 1894. I., p. 578.	F.	2 yrs.	6 mos.	Characteristic appearance. Cannot walk or talk.	15 days	Raw gland.	Improvement.
Crary.* Am. Journal Med. Science, 1894. p. 529.	F.	5 yrs.	3 mos.	Characteristic appearance. Dwarfed, lordosis, impaired intelligence.	2½ mos.	Extract.	Great improvement mentally and physically.
Garrod.† Br. Med. Jour. 1894. II., p. 1112.	F.	8½ yrs.	Not stated.	Characteristic.	1½ yrs.	Not stated.	Lost cretinoid appearance. Grew 5 inches.
Lendon. Aust. M. Gaz., 1894. p. 154.	F.	12 yrs.	Not stated.	33 in. in height. 25 lbs. in weight. Loss of sphincter control.	17 days	Hypoder. inject. of extract.	Improvement — then fever, bronchitis and death.
Ibid.	F.	18 yrs.	Not stated.	Height, 3 ft. 3¾ in. 2¾ in. only growth in 6 yrs.	9 mos.	Not stated.	Grew 4⅜ inches.
Northrup. N. Y. Med. J., 1894. 60, p. 505.	F.	9 yrs.	8 yrs.	Characteristic. Idiotic.	80 days	Extract.	Much improved.
Ibid.	Not stated.	12 yrs.	Not stated.	Characteristic.	Not stated.	Not stated.	Results not marked.

* Indicates that the original papers are accompanied with photographs.

AUTHOR AND REFERENCE.	SEX.	AGE AT BEGINNING OF TREATMENT.	DURATION OF DISEASE.	SYMPTOMS.	DURATION OF TREATMENT.	CHARACTER OF TREATMENT.	RESULTS.
Osler. N. Y. Med. J., 1894. 60, p. 505.	M.	3 yrs.	Not stated.	Characteristic. Could not walk or talk.	14 mos.	————	Oedematous symptoms all disappeared. Walks and talks. Grew 4 inches.
Ibid.	M.	19 yrs.	Not stated.	Not stated.	———	Treatment not systematically carried out.	No material gain.
Railton.* Br. Med. Jour. 1894. I., p. 1180.	M.	14 yrs.	Not stated.	Characteristic. Idiotic. 33 inches high.	11 mos.	Raw gland and tabloids.	Oedematous symptoms disappeared. Cannot talk well. Grew 3 inches.
Smith.* Br. Med. Jour. 1894. I., p. 1178.	M.	9 yrs.	7 yrs.	Not a severe case.	9 mos.	Raw gland and tabloids.	Improvement.
Thomson.* Edin. Med. J., 1894. Feb'y, p. 720.	M.	18 yrs.	16 yrs.	Characteristic. Mind that of a child of 3 years. 33½ inches high. Waddling gait.	12 mos.	Raw gland.	Some toxic symptoms. Skin grew softer and mind became brighter. Grew 4¾ in. Most improvement at first.
Escherich. Wien. Med. Woch., 1895. p. 330.	F.	6½ yrs.	4½ yrs?	Myxoedematous symptoms not marked. "A backward child."	6 mos.	Raw gland of calf.	Grew 18 centimeters.
Lebreton. Gaz. Med. de Paris, 1895. No. 1, p. 8.	M.	13 yrs.	12 yrs.	Characteristic. Idiotic.	Not stated.	Raw gland, slightly browned.	Dentition appeared. Growth resumed. Nothing said of intelligence.
No. 3, p. 31.	M.	3 yrs.	1 yr.	Characteristic.	1 yr.	Dried gland.	Improved.
Sinkler.* Int. Med. Mag. 1894-5. III., p. 785.	F.	4 yrs.	3½ yrs.	Characteristic. Unable to walk, talk or understand. 30 2-8 in. high.	3 mos.	Extract.	Oedematous symptoms mostly disappeared. Became more intelligent and began to talk. Grew 2¼ in.
West.* Arch. of Paed. 1895. p. 348.	F.	17 mos.	Congenital	Stupid. 23¼ in. high. Weight, 14½ lbs. No teeth.	6 mos.	Dessicated extract. Glycerine extract.	Oedematous symptoms disappeared. Intelligent. Eight teeth. Grew 4 inches.
Fruitnight. Arch. of Paed. 1896. p. 143.	M.	4 yrs.	3 yrs.	Cannot walk or talk. Weight, 16½ lbs. Height, 25 in.	1 mo.	Dried gland.	Grew thinner and more intelligent.
Noyes.* N. Y. Med. J., 1896. 63, p. 334.	F.	2 yrs.	1 5-6 yrs.	Characteristic. Length, 24 in.	4½ mos.	Tablets.	Oedematous symptoms gone. Intelligence improves. Begun to creep. Grew 8 inches.
Parker.* Br. Med. Jour. 1896. I., p. 383.	F.	6½ yrs.	Congenital ?	Typical.	12 mos.	Tabloids.	Oedematous symptoms disappeared. Learned to walk. Did not learn to talk.
Peterson.* (Present article.)	M.	18 mos.	?	See this article.	Now 10 mos.	One grain extract daily.	Probably cured. (See report in this article.)
Peterson.* (Present article.)	F.	15 yrs.	?	See this article.	3 mos.	One grain extract daily.	Great improvement. (See report in this article.)
Vinke.* Med. News, 1896. 63, p. 309.	M.	6 yrs.	Congenital	Characteristic appearance. Can walk and talk a little.	5 mos.	Tablets.	Marked improvement in all symptoms.

* Indicates that the original papers are accompanied with photographs.

† Same author reports two other cases not so much improved.

The above table contains most, if not all, of the cases of sporadic cretinism, treated with thyreoid, which have been reported with sufficient detail to render them valuable for statistical purposes. From this summary it appears that under thyreoid treatment the symptoms of myxœdema disappear from the child quite as readily as from the adult. In none of the cases quoted did the general œdematous symptoms fail to yield to the remedy, when it was properly and sufficiently applied. The skin became soft, the swellings disappeared and the whole appearance of the patient was completely changed.

. The carrying out of the treatment of myxœdema is attended with fewer difficulties and dangers in children than in adults. Toxic symptoms have been observed in a few cases only, and but two have died under treatment. Of these one died of intercurrent diphtheria and one of bronchitis ; in neither of these two cases was the treatment regarded as a causative factor of the fatal symptoms.

In addition to the disappearance of the symptoms from the skin and subcutaneous tissues the treatment of sporadic cretinism has in some cases met with brilliant results by permitting a return of development and growth to children in whom these functions had been limited or arrested by the disease. But although marked changes in the mental and physical condition of cretins have occurred, it yet remains to be reported that these cases become the physical and intellectual equals of children who have never had myxœdema.

Improvement consequent upon a return of development has been more constant in the body than in the brain. A large number of the reported cases have grown considerably taller and have acquired sufficient power and control of the limbs to enable them to walk, which had previously been impossible. The teeth, which have been absent or defective, begin to appear normally.

Intellectual progress has been neither so constant nor so rapid. In nearly all the cases there has been noted some mental improvement, but in only a few has the power of speech been acquired when it previously had been absent.

The occurrence, in the formative period of infancy and childhood, of a disease which attacks fundamentally nutrition, development and growth, has much more disastrous effects than when its appearance is delayed until the organism has reached maturity.

And while it is possible that the removal of causes inhibitory to growth may result in a gradual return of developmental processes, the thyreoid treatment of infantile myxœdema has in no case been carried out for a sufficient length of time to permit the assertion that such will be the case. We have been able to find no case in which treatment is reported to have lasted more than a year and one-half, and of no case is it said that the patient was, in all respects, cured. But from the fact that in nearly all of the cases treatment was not instituted until the child was several years of age and had developed but little or not at all for a considerable length of time, several years would be necessary, by the natural processes of development, for the complete re-establishment of normal growth.

Although data sufficient to justify positive assertions are lacking it seems entirely in the range of possibility that if the treatment of sporadic cretinism were begun at the outset of the disease, before growth was seriously interfered with, it would permit the proper development of the child, without myxœdematous symptoms, as long as the thyreoid was administered.

These questions must find their solution in the future when the thyreoid treatment will have been used for a time sufficiently long to justify conclusions as to the extent and permanency of its value.

FACIAL HERPES SECONDARY TO TOOTH-ACHE.

By George Carpenter, M. D.,
London.

IN the June 1, 1892, number of the *British Journal of Dental Science*, pp. 481 to 486 (copied subsequently verbatim into L'Odontologie, pp. 4;7 to 460), I called attention to the not infrequent association of facial herpes with tooth-ache, and pointed out its alliance with zoster, an undoubted nervous affection, in that it was due to irritation of the trifacial nerve, but here induced possibly reflexly, and not directly by interstitial neuritis of the sensory ganglion or some part of the course of the nerve, as in zoster. The not infrequent accompaniment of herpes facialis with pneumonia, bronchitis, various throat affections, or an ordinary "cold," or apart from any known association, so far has not been able to be explained by direct or indirect irritation of the fifth nerve, and this variety of herpes has been divorced from zona and pitchforked into the erythematous group, owing to the fact that it is symptomatic of some "internal" disturbance, is usually induced by "irritation" of a mucous membrane, and frequently recurs. The facial herpes about which I am now writing cannot be so grouped, and, in my opinion, is allied to zoster, and not to the erythemata. Since writing the above paper I have over and over again convinced myself of the truth of the original observation. The other evening I was pleased to receive unsought corroboration of the views expressed above. A friend and colleague showed me a small patch of herpes on his lower lip, and asked me if I knew what was the matter with him. I replied, perhaps rather rashly, you have tooth-ache. Astonished by this rapid diagnosis, he quickly said, "How did you know this?" and on my informing him of the results of my own studies on this subject, he told me that he thought he had made a fresh observation, and volunteered the following account of his troubles, which I now relate as independent testimony, and with the additional value of having come from the personal observations of a very careful and distinguished observer:

"I had a second lower molar, which had been stopped, and which had for some time been affected with chronic periodontitis. From November, 1895, to the end of January, 1896, three attacks of herpes occurred on the same side, the eruption being on the lower lip, the roof of the mouth, and on one occasion the upper lip was attacked. At each outbreak of the eruption the tooth became painfully tender. On extraction, it was found to have a small chronic abscess sac at the apex of one of the fangs. I had never previously suffered from herpes, and, apart from this, was in good health. I had no doubt that the herpes was due to dental irritation, and had the tooth extracted on that account."

I hope I may be excused from again narrating this, but my friend's experiences have proved too strong a temptation for me to refrain from referring to this connection once again; it also gives me the opportunity of relating my fresh experiences and that of calling attention in a *medical* journal to a not unimportant diagnostic sign of tooth-ache in children. It will, I hope, prevent facial herpes in the young being banished in an off-hand way, as only a "cold," and render an examination of the teeth necessary before passing this comfortable verdict.

Children suffering from tooth-ache do not always complain of their teeth, and this fact makes it additionally important that the presence of facial herpes should be looked upon as possibly due to dental worry and its causation determined, if possible.

Slobbering.—DR. SANCHEZ DE SILVERA (*Lo Sperimentale*) asserts that healthy infants never dribble. The later condition is due either to disorders of the digestive apparatus or to obstruction of nasal respiration, but is altogether unconnected with dentition.—*Med. Rec., 1896, xlix, 467.*

THE STRUMOUS OR SCROFULOUS DIATHESIS.*

By JOHN A. LARRABEE, M. D.,
Professor of Obstetrics and Diseases of Children in the Hospital College of Medicine, etc., Louisville, Ky.

THIS little girl, aged eleven years, has several enlarged cervical glands on both sides of the neck. There are two other children in the family, both apparently in good health. These enlargements are usually called strumous or scrofulous glands. The history in this case points distinctly to scrofula, which raises an important question and a somewhat undecided point as to the identity of scrofulous glands and tuberculous glands.

Tuberculosis of lymphatic glands is a disease that we are all familiar with ; tuberculosis is a process affecting the glandular system, as the bronchial glands for instance, and we may have infection of the cervical glands, requiring surgical interference ; scraping out of the tuberculous tissues is something you have all seen done here in our clinic. There should be in such cases a thorough elimination of the contents of the gland, with destruction of the gland itself.

Now, those who deny such a possibility as a scrofulous diathesis, will have to explain a great many things in regard to tuberculous glands. We recognize a strumous independent of a tuberculous condition ; we recognize that tuberculosis is due and dependent entirely upon the tubercle bacillus.

Independent of that we have a disease known as scrofula, which, in my judgment, is a degenerated syphilis, *i. e.*, a disease which is more than likely developed in the offspring of people who have had tertiary syphilis. Now, we recognize a diathesis called scrofulous in two classes of patients. Those with light blonde flaxen hair, with thin skin, very light complexion, and especially where the features are thickened, or "dished," the face having a dished expression, nose blunt, lips pouted and full, cheeks full, and all parts of the body seem to be in a blunted condition. If we look at the skin closely we will find it covered with fine silken hairs. This is a strong and pronounced indication of the strumous condition. On the other hand, we have the black hair and dark complexion, which is also strumous. The middle ground should be taken if we are to select people as we would a horse, and the law holds good as regards a light and dark horse as it does in the human family between light and dark complexions. If you want a strong horse, and one embracing all the known good qualities, you will take a chestnut bay, the medium of all colors.

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* Clinical Lecture Delivered at the Hospital College of Medicine.

The difference between scrofulous glandular enlargements and tuberculosis of the glands is easily seen. The children with scrofula have a characteristic flat, blunt nose, and peculiar cheeks. These children, however, outlive this condition, and all traces disappear, but you must get rid of every part of a tuberculous process in order to effect a cure. Scrofulous glands sometimes ulcerate and discharge cheesy matter, afterwards healing from the bottom and getting well, but a tuberculous gland never does this.

This child is typically strumous. All the glands are enlarged. Scrofula is a diathesis born of debility, attended by an increase of normal tissue out of place. Scrofula builds up not foreign tissue, but normal interstitial tissue, at the expense of better tissue. It builds up the cheeks, builds up the lungs, builds up the muscles and makes the child appear plump and firm. While it is doing this, it thickens all parts of the body, including the internal organs ; it thickens the intercellular structure of the liver ; thickens the packing tissue of the brain ; crowds out the better matter by increasing the growth of the packing tissue. What I choose to call packing tissue is sometimes called cellular tissue, or interstitial tissue. To illustrate : If you were going to send a lot of bottles anywhere, you would put them in a box and pack sawdust or other soft material around them, and the more packing you put in the better it would be for the bottles. Now, you increase that packing tissue to a great extent, and you will crowd out the bottles entirely. Scrofula is simply an indication of an increased growth out of place. So that you may expect scrofulous children to have evidences of this. All through the strumous diathesis runs this tendency to enlarged lymphatic glands.

The treatment of scrofula should not be directed solely to the treatment of these individual glands, but to the diathesis of which they are the result. The best means are found in Nature—pure air, exercise, a diet of wholesome food, and perfect hygienic surroundings ; these are the fundamental medicines to be used in the treatment of scrofula, without which others are practically valueless. The addition of iodide of iron to stimulate the glandular system and to build up the blood corpuscles is useful.

Another valuable aid is the iodo-bromide of calcium.

In treating scrofula do not paint the gland with iodine ; do not wash it with walnut leaves ; this is not sufficient ; treat the diathesis ; give the child wholesome diet, proper hygienic surroundings and iodo-bromide of calcium. Keep up these measures for a year or two, and in most cases the child will be cured, so far as the scrofula is concerned.

This patient, male, æt. three and one-half years, is brought to us this afternoon for the first time. Six months ago he received an injury to the knee, and has complained of pain in the knee joint ever since. Later he received a second injury, and from that time pain has been constant, referred always to the knee joint. He has the typical position of hip joint disease, but has never complained of the slightest pain in the hip. The question naturally arises here, as in the other case, how much does the diathesis of this child play in the production of this trouble, and how much the local injury. The pain is different from that which would be produced by a scrofulous condition of the knee joint. In scrofulous ulceration, pain is more violent and severe in those cases in which there is a local injury.

Now this child has severe pain, which is unmistakably shown by the expression of pain and fear.

On examining the child, at first sight the limb on the affected side seems longer, and the gluteal crease is entirely obliterated, which is an important diagnostic point. The apparent lengthening of this limb is nature's effort to get the ulcerated surfaces apart. This child is still in the first stage of the disease. The next stage is an apparent shortening, and finally the ulcerative process extends to the base of the limiting capsule, and it is broken. Then we have shortening and an inversion of the foot.

In examining these cases, always place the child flat upon the table, and you will observe, on drawing a line from one anterior superior spinous process to the other, and at right angles to it, beginning at the manubrium sterni, that the lengthening is not real, but due to the sagging of the pelvis on the affected side.

An interesting feature about these cases is that pain is more severe at night, and more or less absent during the day. We have seen that all pains of a syphilitic character are intensified at night; but that will not explain the pain in this case. Here it is produced by a relaxation of the muscles, which allows the bone to come in contact with the ulcerated surface. During the day these muscles protect the joint, keeping the ulcerated spots apart.

Our treatment should be extension of the leg, to keep the inflamed surfaces of the joint separated. Put on a perineal strap and extension brace, so that the joint surfaces do not touch under any circumstances, and so that walking will not allow the head of the femur to go into the acetabulum deep enough to strike the inflamed spot.

The next stage will be destruction of the bone and the formation of abscesses. It is a case of hip joint disease with a scrofulous diathesis, and even now, if put under proper treatment, a cure can be effected.

CONGENITAL MEDIAN FISSURE OF THE NOSE.

By JOHN POLAND, F. R. C. S.,

Surgeon to the Miller Hospital, Greenwich, and to the City Orthopædic Hospital, London.

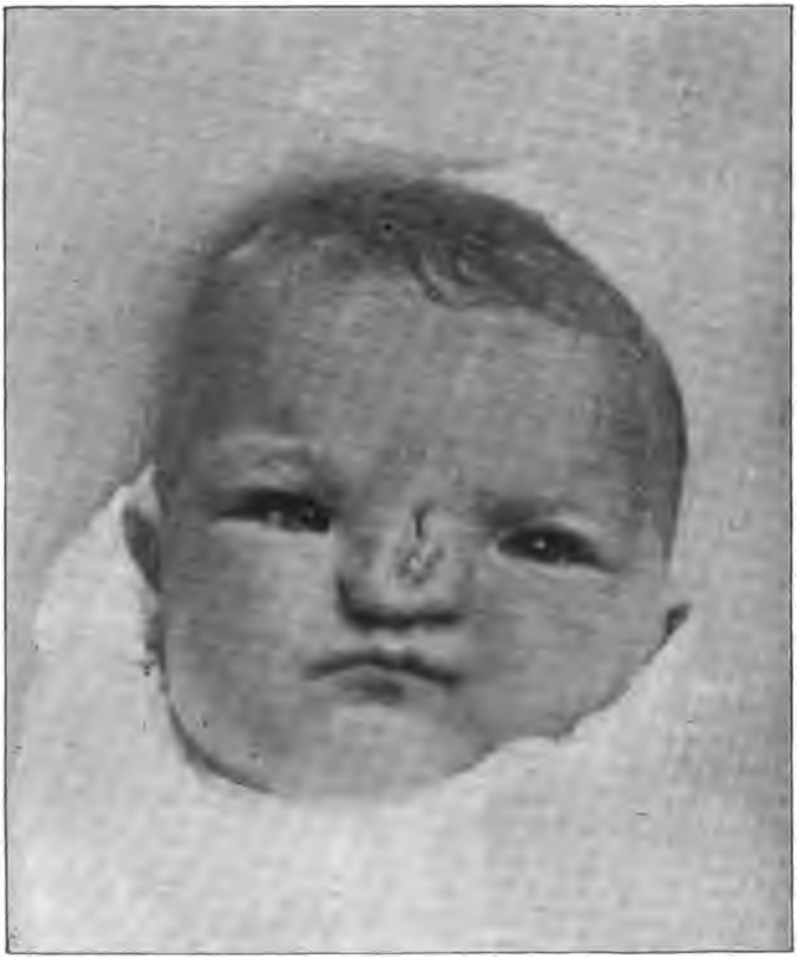
THE illustration represents an exceedingly rare form of congenital malformation of the nose. The patient was shown on October the 14th, 1894, at the first meeting of the West Kent Medico-Chirurgical Society. The late Mr. Arthur Durham, who on this occasion delivered the Purvis oration, his last public lecture, kindly saw the child and told Mr. Poland that he had not met with the condition before.

Mr. Rushton Parker, however, in Heath's Dictionary of Surgery, mentions a case he had seen under the care of Mr. Puzey. A male child had a peculiarly broad, flattened and grooved nose, owing to improper apposition of the nasal bones and septum, the effect of which was a deep median furrow, on the sides and floor of which the skin was stretched continuously, making manifest the character of the defect. Operative treatment very much reduced the deformity.

The present instance occurred in a girl aged nine months, and in it, also, the fissure was clearly due to the want of union of the lateral nasal and septal parts. The nasal bones were thereby considerably separated, producing the remarkably broad and flattened appearance of the nose. The small, irregular ridge of skin seen within the fissure extended downwards somewhat obliquely from the left margin of the groove, so it was probably a portion of the mid-frontal process. The fissure was lined throughout with skin, so that no opening existed into the nasal fossæ. It was three-quarters of an inch deep at the lower part and five-eighths of an inch deep at the upper part, while between the median ridge and the left margin it was not more than one-eighth of an inch deep. The width at the upper part was three-eighths of an inch. The anterior nostrils were perfect, with the exception of slight stretching transversely.

The skin at the inner canthus of each eye had the appearance of a flat fold, which completely obscured the caruncles.

A plastic operation and removal of the small median ridge greatly improved the appearance of the nose, and the caruncles were afterwards clearly visible.



CONGENITAL MEDIAN FISSURE OF THE NOSE.

A DESCRIPTION OF PLEURISY, WITH REMARKS ON PERICARDITIS.

Taken from "Evanson and Maunsell's Practical Treatise on the Management of the Diseases of Children." Published in Dublin 56 *years ago.*

PLEURITIS (p. 319) is occasionally discovered upon the post-mortem examination, but there are no diagnostic marks which distinguish it from other inflammations of the chest during life—" the integrity of the cry," mentioned by M. Billard, being altogether insufficient for diagnosis. This is of the less consequence, however, as the treatment must be similar to that of any other inflammatory affection of the chest. There does not appear to be much tendency to pleuritis in the young subject, as we do not meet with traces of it in their bodies nearly so often as in those of adults.

We may mention here that Pericarditis may be shown by morbid appearances to have existed in young children ; but as the discovery of it during life, in such patients, can in the present state of our knowledge be only a guess,* and as its treatment must be identical with that of the inflammations we have been just considering, it would be out of place to notice it at greater length.

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* A case remarkably corroborative of this statement was related, by Professor Benson, to the Surgical Society of Ireland, during its present session. A child, five months old, died after an illness of eight days, during which period it was treated by three medical men of experience. The illness was chiefly indicated by screaming. On examination, after death, a large quantity of fluid was found within the pericardium ; the surface of which and of the heart were coated with a thick layer of lymph ; the walls of the ventricle, when divided, presented an unusual thickness ; where the lung lay in contact with the diaphragm there was some lymphy exudation, but there was no pneumonia. See *Medical Press*, vol. 3, page 28. (Note to Third Edition.)

Sanitary Progress and the Death Rate.—Nearly forty years ago MACAULAY (" *History*," *vol. i, p. 383*) wrote : " At present only one inhabitant of London in forty dies annually. The difference between the London of the nineteenth century and the London of the seventeenth century is very far greater than the difference between London in an ordinary year and London in a year of cholera." It illustrates very vividly the advance of sanitary science since Macaulay, that the death rate, which he esteems so small, has after his death been decreased nearly one-half—a decrease greater than that observed by him to have resulted from two centuries of sanitary progress. London now claims to be the healthiest of the large cities, the death rate being only 16.3 per 1,000 persons. The death rates in other large cities are : Berlin, 18.2 ; Paris, 20.5 ; Vienna, 22.5 ; New York, 19.6.—*Practitioner, 1896, lvi, 335.*

PRACTICAL NOTES.

Thirst and Great Dryness of the Mouth in sickness is often relieved by a teaspoonful of powdered gum arabic, beaten thoroughly with a couple of teaspoonfuls of glycerine, to which is added a glass of cold water and enough lemon juice to make the mixture palatable. The mixture may be taken freely, with great relief to the dryness of the mouth and thirst.—*Meyer Bros.' Druggist, 1896, xvii, 137.*

For Inflamed Gums.—

I.

Sodium salicylate,	ʒ ij
Distilled water,	ʒ x

II.

Borax,	ʒ iss
Sodium salicylate,	ʒ iiss
Tincture of myrrh,	ʒ ij
Syrup of mulberry,	ʒ viiss
Distilled water,	ʒ viiss

III.

Potassium chlorate,	ʒ j
Cherry laurel water,	ʒ iiss
Syrup of marshmallow,	ʒ iv
Decoction of poppy,	ʒ xxxiii

IV.

Borax,	ʒ j
Sodium bicarbonate,	ʒ ij
Distilled water,	ʒ l

Either paint the gums or rinse the mouth, as preferred.—*Rev. Int. de Med.,—Am. Drug., 1896, xxviii, 154.*

Hot Steam has been employed by Liberson in chronic eczema with good results. It aids in the absorption of superficial and deep infiltrations, diminishes or arrests purulent secretions, removes crusts, checks oozing and provokes a regeneration of healthy tissues. The duration of the *séance* is from a quarter to a half hour.

In obstinate cases it has given good results.—*La Med. Mod.,—Med. Rec., 1896, xlix, 463.*

Laryngismus Stridulus.—

℞	Potass. citrat.,	ʒ i
	Syr. ipecac,	fl ʒ ij
	Tr. opii deod.,	gtt. xij
	Syr. simp.,	fl. ʒ ij
	Aquæ,	fl. ℥ iss

M. Sig. Teaspoonful every two hours for a child of two years. —*Meigs and Pepper, Med. Rec., 1896, xlix, 422.*

Paralysis of Accommodation Treated with Behring's Antidiphtheritic Serum.—SCHMIDT-RIMPLER (*Ctrlbl. f. prak. Aug., December, 1894*) has treated three cases of post-diphtheritic paralysis of accommodation by injections of the serum under the skin of the breast, and these were never followed by any general disturbance. He used an ordinary Pravaz syringe. The cases healed much more rapidly than usual, and the speech, which had been affected, was remarkably improved.—*Med. Journ., 1896, lxiii, 404.*

Constipation in the Young.—Marfan says that a nursling should have two to four stools a day during the first two months, and one to two after the first year. Whenever they are less frequent constipation is present. Transient or habitual constipation may be due to retained meconium, stricture of intestine, atresia ani; symptomatic constipation to febrile states, cerebral disorders; alimentary constipation to simple or sterilized cow's milk, excess of casein or mineral waters, deficient sugar or fat; congenital constipation to intestinal occlusion, excess of length or folds of the large bowel. Consequences—rectal prolapse, umbilical hernia, invagination of the bowel, convulsions, prurigo, urticaria, eczema, anal fissure, mucous, serous or ulcerative colitis. Treatment—alimentary of nurslings, a little sugar water (Jacobi), cow's milk 4 parts to 100 of sugar water; rectal lavage by the urethral catheter, two tablespoonfuls of glycerine to one litre of water or two tablespoonfuls of oil with the yolk of an egg to 60 grms. of water; massage, electricity; suppositories for fissure; no laxatives before three months, no purgatives during the first year.—*Practitioner, 1896, lvi, 333.*

Sea Air in Diseases of Children.—Leroux argues that sea air should not be indiscriminately advised for children. He considers that it is apt to have an injurious effect in cases of heart disease and hereditary syphilis. It is of use in anæmia, except in rheumatic or neurotic patients. As a rule, it is of advantage in lymphatic children, but not in those who are highly irritable or liable to inflammatory complications. Scrofulous children suffering from chronic inflammatory complications, chronic conjunctivitis or otorrhœa, hypertrophy of the tonsils, or chronic cutaneous affections should be sent to the seaside, unless it is known that they are liable to acute inflammatory exacerbations. On the other hand, weeping eczema, acute impetigo, pruriginous skin affections, and acute painful ear disease are contra-indications. Children suffering from chronic tuberculosis of bones or glands do well at the seaside, unless there is copious suppuration. Pulmonary tuberculosis is always a contra-indication, and the propriety of sending children with enlarged abdominal or thoracic glands is very open to question. As a rule, lupus does not do well. Rickets, if the children are sent at an early stage of the disease, is cured by continuous residence at the seaside for a year or more.—*Practitioner, 1896, lvi, 333.*

Boiled Milk.—Practical and every-day experience shows that when milk is boiled it is not only more easily digested, but that it has a nutritive value quite equal to the raw article. Experiments undertaken by Dr. C. Chamouin (*Canadian Lancet*), first with kittens and afterwards with infants, showed after exhaustive and repeated trials that the kittens fed on boiled milk were "twice again as fat" as those supplied with the raw milk, and that the boiling of milk is the means of preventing the loss of innumerable lives by gastro-intestinal disease. Not only so, but it is more easily digested, and agrees with a far greater percentage of cases than unboiled milk. There is ample authority for this view of the case, but certain points must be attended to, else the results will not be so favorable. First, all the vessels in which the milk is carried, boiled, and afterwards kept must be *scrupulously clean.* Nothing else but absolute freedom from dirt will suffice. Then it should never be boiled in an open vessel; this should have a close cover. Lastly, it need not be kept at 212° F. for more than twenty minutes. This is sufficient to sterilize and cook it, and no further boiling is necessary.—*Practitioner, 1896, lvi, 330.*

The Pharmacy of Phosphorus.—*Phosphorated Oil*—Of the liquid preparations, this, which is official—containing about 1 per cent. of phosphorus dissolved in prepared almond oil, and the dose of which is stated to be 5 to 10 minims (greatly too much)—is exceedingly nauseous, administer it as you will. Dr Redwood suggested it being emulsified with yolk of egg, liquor potassæ, syrup of tolu and chloroform water (*Ph. J.* [*3*], *iv*, *991*), but it is never employed medicinally. It may be used as a toy, exhibiting its peculiar phosphorescence, or for producing evanescent "writing on the wall," but the medical profession and the public refuse it. It appears to be a nearly saturated solution at the ordinary temperature, although as much as 2 per cent. of phosphorus can be dissolved by the aid of heat and the exclusion of air, nearly one-half crystallizes out on cooling. It, however, may be conveniently administered in the form of perles or capsules, which are largely used, containing a dose equal to 1-100th, 1-65th or 1-32d grain of phosphorus respectively; but, unfortunately, they are irregular both in size and in the amount of contents; still they are well protected from the air.

Phosphorated Cod Liver Oil contains about 1-100th grain in a drachm. It may be made by adding one volume of the official phosphorated oil to fifty-nine volumes of cod liver oil. It is unpalatable and quickly oxidizes and coats the sides of the bottle. Still it may be kept reasonably stable in capsules, containing one drachm in each.

Compound Tincture of Phosphorus, B. P. C., is prepared by dissolving phosphorus, 1 part, in chloroform, 30 volumes, and adding it to absolute alcohol so as to contain 1 part of phosphorus in 600 volumes. Although it keeps without depositing, it becomes acid, and requires to be freshly prepared. When diluted with four volumes of glycerin, it forms the *Elixir of Phosphorus*, B. P. C., which contains 1-50th grain in a fluid drachm. If freshly prepared this is palatable and well borne by the stomach.—W. MARTINDALE, *Pharm. Journ.*, *1896*, *lv*, *201*.

Dispensing Alkaloids.—Bindloss pointed out the advisability of always attaching a "shake the bottle" label when dispensing an alkaloidal liquor in a mixture containing an alkali. This, he stated, was a safe rule, and one that should always be observed; at the same time it was well to remember that most alkaloids are slightly soluble in water, for instance, morphine, 1 in 1,000; strychnine, 1 in 7,000, which meant that six ounces of water are capable of dissolving all the strychnine contained in 40 minims of the official liquor, and all the morphine in 280 minims of any of the official morphine liquors, even supposing it were all deposited. Therefore, as far as actual necessity goes, liquor morphine seldom requires a "shake," and liquor strychnine only occasionally.—*Pharm. J.*, *1896*, *lv*, *235*.

Editorial.

ASAPROL; A SOLUBLE ANTISEPTIC.

IN these days of restless therapeutic energy no remedy proposed for adult medication is likely to escape the attention of those who confine their study and practice to the diseases of children. Thus it is that asaprol, whose value has been ascertained and its indications formulated by Stackler, Dujardin-Beaumetz, Bompart and Wilcox, was not destined to remain unknown to the pediatrist. The novelty of an antiseptic which has been demonstrated to possess valuable properties, and at the same time to be harmless to the individual, meeting in all respects the definition of Bouchard, and in addition, which is perfectly soluble, would suggest that, in the diseases of children, it would find a field of peculiar usefulness. So, when the masterly and exhaustive paper of Moncorvo appeared. the expectation was realized.

Asaprol (ἄ, privative, and σαπρὸς, putrid) was named by Dujardin-Beaumetz and first prepared by Bang. If sulphuric acid acts upon absolutely pure B-naphtol, two acid mono-sulphonates are formed, and the α-monosulphonate is soluble in cold water; of this asaprol is the calcium salt. It is a whitish, neutral powder, soluble in one and one-half parts of distilled water and in about three parts of alcohol. The first taste is bitterish, but this soon disappears, and the final taste is sweetish. It is incompatible with all salts which precipate lime and with potassium iodide. It is unirritating and is excreted by the urine without producing any untoward symptoms. Stackler, in his report from the bacteriological laboratory, finds that it is a reliable antiseptic. Clinically it has been found to be an antipyretic, possessing also analgesic properties. It has been employed for the reduction of temperature, and in the treatment of various infectious diseases, not omitting epidemic influenza and rheumatism of various kinds, and for fermentation in the gastro-intestinal tract.

Moncorvo finds that when given internally to a child in health it has no influence upon temperature or respiration, nor does it disturb the digestive apparatus. In acute infectious diseases it lowers the temperature and diminishes the frequency of the pulse. It may give rise to a partial or general cutaneous transpiration more or less abundant, and in the majority of cases at the same time it increases the quantity of urine. It has been given to children in age from ten days to twelve years, in daily doses of from five to forty-five grains, in solution, without giving rise to headaches, vertigo, tinnitus, nausea nor vomiting; it is easily borne by the little patients. Of the febrile diseases, malaria, acute tuberculosis and broncho-pneumonia have been treated. The temperature in malaria rapidly falls, the skin is covered with perspiration, the liver and spleen become smaller, the digestive disturbances improve and the patient becomes calm and sleeps better. Topical applications have been employed for cutaneous diseases, those of the ear, nasal fossæ and throat, for vulvo-vaginitis and to secure intestinal antisepsis. As a local application it can be employed as a one per cent aqueous solution, or with lanolin or vaselin. In whooping cough as a one per cent spray, repeated several times daily, to the periglottic region, the speedy disappearance of the disease has resulted. Not only are the results excellent in both malaria and whooping cough, but one patient who suffered from the former disease, and as well from chorea, was completely cured of both diseases, this being the only drug employed.

It is noteworthy that although the drug had been carefully tested in clinical work upon adults, it remained for Moncorvo to demonstrate that it was a hæmostatic. Now that the remedy in its later investigation has given confirmation of the earlier observations it is hoped that the results of the study of its action upon the diseases of children may give a fresh impetus to its use, so that this remedy, which occupies a unique field of usefulness, may be properly appreciated.

REYNOLD W. WILCOX, M. D., New York.

Society Reports.

THE LOUISVILLE CLINICAL SOCIETY.

Trismus Neonatorum.—J. M. KRIM said: Twelve days ago I delivered a woman, aged thirty-six years, fourth confinement, of a healthy child, weighing 7¾ pounds. The child eight or nine hours after birth nursed in a perfectly natural way, and continued to do so for twenty-four hours. On the second day it refused to nurse. There was an excessive discharge from the bowels, but little attention was paid to this feature. On the third day I examined the child and found, instead of being the ordinary faecal matter of infants, there was a bloody discharge. The child had vomited once or twice, and the stools, I think, amounted to ten or twelve within a few hours. I gave some subnitrate of bismuth to prevent the excessive discharge, and saw the child again at four o'clock in the evening. I found there had been fifteen stools since eleven o'clock, consisting largely of blood. There had been some jaundice but no stiffness of the jaw; the mouth could be opened, but the child still refused to nurse. Upon examination of the umbilical stump, I found a dark areola around it, and some discoloration about the nates. There was also a foul odor emanating from the umbilical stump. The following day the child was not able to open its mouth, and the child died from trismus on the seventh day after birth. I am unable to account for the dark gangrenous areola around the umbilicus, extending in every direction for a distance of two inches. There was no suppuration of the skin surrounding the umbilicus or separation from the umbilical stump.

DISCUSSION.

P. GUNTERMANN: It is a plain case of trismus neonatorum, but it was very slow in its development. The discolored or gangrenous appearance about the umbilicus is rather strange, and no explanation is made of the similar condition which existed about the anus. I would like to know if there was any connection between these two conditions, i. e., the trismus and the gangrenous condition about the umbilical stump and the nates.

CARL WEIDNER: It would be interesting in a case of this kind to make an examination of the tissues microscopically and bacteriologically. I have never seen a case of this kind, but as it has been described, it was evidently a typical case of trismus neonatorum, and the chances are that the specific poison entered through the tissues of the cord. In many cases of typical tetanus, I think trismus shows itself as a part of the disease. There is a difference of opinion on the subject, but some claim that trismus is due to the same poison that causes tetanus. I remember an experiment made by Kitasato in Ewald's clinic with tetanus serum in 1891. They used the serum in a case of trismus neonatorum, but the child died. I conclude from this experiment that Ewald and others look upon trismus neonatorum and tetanus as having some etiological connection.

J. M. KRIM: In reporting the case I mentioned a bloody discharge from the bowels, and am surprised that in the discussion no one has touched upon this point. Some have described a condition which they call melena, and claim that it occurs in cases where there is difficulty in completing the labor. In this case the labor was completed in six hours; there was no difficulty and no complication in labor, and no compression upon the child or upon the umbilical cord. This is the third case of the kind I have seen in an experience of twenty-six years, and in each case I have noticed there was a very large funis. I make it a rule in ligating the funis to use antiseptic silk thread, and after tying and severing the funis to cover the surface with carbolic acid.

I cannot account for the bloody discharge. Some claim it is an ulceration caused by compression of the abdominal walls during labor. As far as the dark areola around the umbilicus is concerned, I believe it was a gangrenous slough; and I further believe the same condition existed on the nates. The child had a temperature the third day after birth of 103° F. Jaundice did not develop until the fourth day. There was no stiffness of the jaws until the fifth day; until that time we could separate the jaws by moving them, but the child would not nurse.

HUNTERIAN SOCIETY OF LONDON.

The Nose and Micro-Organisms.—St. Clair Thomson and R. T. Hewlett, of London, have found that the mucus in the interior of the healthy nose is practically sterile, while the vestibule and its living vibrissæ are always teeming with micro-organisms. They have also found that inspired air after passing through the nose is practically sterile. These investigations are of importance in emphasizing the necessity of proper nasal respiration in reducing the chances of infection to a minimum, a point insisted on by J. H. Sequeira in a paper read before the Hunterian Society of London, in which he refers especially to diphtheria, for he finds that 80 per cent. of diphtheria cases occur between the ages of two and fourteen years, a period during which enlarged tonsils and adenoids are most prevalent, while only three per cent. occur after the age of thirty.

The investigation of Thomson and Hewlett also appear to demonstrate that, in performing operations on the interior of the nose, the local application of antiseptics is unnecessary, as long as means are taken to prevent infection from the vestibule and from impure instruments or dressings.

Formic Aldehyde in the Preservation of Milk, and its Detection Therein.—Since a dilute solution of formic aldehyde (formalin) is being used as a milk preservative, R. T. Thomson has contributed to the *Chemical News* (*Vol. lxxi, 247*) a note on its preservative action and an analytical method for its detection. The author finds that a 40 per cent. solution of formalin is at least four times as effective as a mixture of boric acid and borax and equal to salicylic acid; he also notes that boric acid alone is much less effective than when used with borax. To detect the presence of formic aldehyde in milk, 100 c.c. are distilled until about a fifth comes over; this is transferred to a stoppered tube, and about 5 drops of ammonio-nitrate of silver solution added. This solution consists of 1 part of nitrate of silver in 30 parts of water, dilute ammonia being added until the precipitate at first formed is dissolved, care being taken to avoid an excess, then the whole is made up to 50 parts with water. The mixture of milk distillate and silver solution is then allowed to stand for from 12 to 18 hours in a dark place, when, if formic aldehyde is present, a strong black color or deposit will be produced. A light brown color must be disregarded, nothing short of a distinct black tint being sufficient to indicate the presence of formalin. When as little as 2 grains of formalin per gallon of milk has been used, a distinct reaction is obtained. The author finds that 4 or 5 drops of formalin added to 100 c.c. of milk will enable samples to be kept for six weeks, which have given the same results on analysis after that time as were obtained from the samples when fresh. Formalin should, therefore, prove useful in preserving samples of milk which may be required at a later period for analytical reference.—*Pharm. J., 1896, lv, 230.*

NOTES ON TREATMENT.

ERYSIPELAS.

Every case of erysipelas must be isolated. The diet and general treatment must be regulated on general principles.

In mild cases, the following powder for local treatment is good:

℞ Acidi salicyl., gr. viii;
Zinci oxid., ℥ iss;
Amyli, ℥ ss.

Mix. Sig. Dust the infected area and cover with soft cotton.—A. JACOBI.

℞ Lotio. plumbi et opii, ℥ viii.

Sig. Keep the affected skin wet with this wash.

℞ Resorcin, gr. i;
Traumaticin, Oi.

Mix. Sig. External use.—FERREIRE.

℞ Resorcin, ʒ i.
Lard, ℥ i

Mix. Sig. External use.

℞ Acidi carbolici, ʒ i;
Acidi oleic., ℥ i to ii.

Mix. Sig. Apply, not on, but around, the erysipelatous area at frequent intervals.—A. JACOBI.

In using carbolic acid in infants, always be on guard against poisoning. The first evidence of poisoning is shown by the urine, which leaves a pink stain on the napkins after being exposed to the air for half an hour.

An excellent application for erysipelas is ichthyol in collodion, or even better with glycerol.

℞ Ichthyol, ʒ i to ii;
Glycerol, ℥ i.

Mix. Sig. External use.—J. ABBOTT CANTRELL.

The most brilliant results have been obtained by the surgical treatment of erysipelas, and this mode is of especial value in infantile erysipelas, which is so often migrating, and is dangerous in proportion to the extent of fresh surface which becomes infected. The aim of this treatment is to hedge in the morbid process, which is accomplished in most cases with rapid and brilliant success. The patient must be anaesthetized, although local anaesthesia with cocaine or ethyl chloride will answer, but not nearly so well. Rail-fence-like scarifications, double and crossing each other several times, are made through the superficial portion of the skin, just outside the infected area, so that the erysipelas is inclosed. This is called the Kraske–Riedel fence, and into this wound is rubbed a 1 to 500 solution of bichloride of mercury, and it is kept wet by means of a compress, with a 1 to 1000 solution of the same antiseptic. Care must be taken that the fence be made as close to the margin of the erysipelas as possible, but still outside of it. The process rarely jumps this fence, and, in the rare cases in which it does get over, the disease becomes more benign, and a second fence always succeeds in keeping it in.

J. LEWIS SMITH advises for a child, from one to two years old, the internal use of four drops of the tincture of the chloride of iron every three hours; or either alone, or in addition to the iron, one of the preparations of cinchona. He obtains the best results by applying the following ointment over the inflamed surface every three or four hours:

℞ Ichthyol, ʒ i;
Ung. aquae rosae, ℥ i.
Mix. Sig. External use.

℞ Linseed oil,
White lead.

Mix enough oil with the lead to make a thin paste, which is painted freely over the erysipelatous skin.—FRERE.

Many other local applications of more or less value have been recommended, viz.: rice flour, lycopodium, oxide of zinc, potters' clay, talcum, lard and chalk, glycerine, white of an egg, solution of iodoform in collodion, ethereal solution of camphor and tannin, cold water, sugar of lead, alum, sulphate of iron, nitrate of silver, tincture of iodine and turpentine.

℞ Benzoate of soda, ʒ ss;
Div. in chart. No. xii (12).

Sig. One every four hours for a child of a week old.—LEHNEBACH.

Jaborandi was first recommended by Da Costa, but its use in children requires great caution. The dose must be carefully graduated to the age of the child. The object is to make the initial dose sufficient to produce a pronounced sweat, and thereafter to give every four hours doses of the fluid extract of jaborandi sufficient to maintain a gentle diaphoresis.—PACKARD.

℞	Camphor	ʒ i;
	Tannin	ʒ i;
	Ether	℥ i.

Mix. Sig. Brush the infected surface every three hours.—TROUSSEAU.

Another excellent application is:

℞	Creolin,	ʒ ss;
	Iodoform,	ʒ ii;
	Lanolin,	ʒ v.

Mix. Sig. External use.—KOCH.

High temperature should be reduced by the application of cold externally—sponging, the wet pack or the bath. Antipyretic drugs should be employed with great care, used only in minimum doses and always sheathed with a heart stimulant. The following is effectual and very safe:

℞	Phenocoll,	gr. xv;
	Camphor. monobromat.,	gr. ii;
	Caffein citratis,	gr. ii.

Mix. Divide into twelve powders.
Sig. Use one as needed for fever in a child four years old.

For the delirium, the best results are obtained by reducing the temperature, and if the delirium does not then abate, give bromide of potash, chloral and, as a last resort, opium.

However, the most promising results in the treatment of erysipelas are offered by the recent advances in serum therapy. Marmorek, of Vienna, and recently Gibier, of New York, have succeeded in producing a good streptococcus antitoxin, which certainly offers the most rational treatment of erysipelas so far brought forward. It is perfectly harmless, and, if efficient, the results ought to be very brilliant.

Ipecacuanha in Bee Stings.—A paste of pulverized ipecac is said to be a valuable local application in bee stings.—*Med. Rec, 1896, xlix, 459.*

Abstracts.

THE SURGICAL ASPECTS OF THE NEW PHOTOGRAPHY.

Albert Carless, after a careful review of all the reports on Röntgen's discovery, asks (*Practitioner, 1896, lvi, 235*) in conclusion: What value, from a surgical standpoint, are we to attach to it? We must remember that it is in its earliest infancy and that we can only speak of it in the most guarded fashion. If the intensity of the rays can be increased, or if means are found to effect their reflection or refraction, then possibly we may have to reconsider our verdict; but as things are at present there is but little doubt that the part played by it will not be one of great importance. Obscure injuries and conditions of the fingers and toes will lend themselves readily to its application; and it will, without any doubt, be a useful agent in solving certain questions of diagnosis in these regions, although even here the majority of such affections will be diagnosed just as easily by the educated touch of the skilled surgeon. Injuries or diseases of the wrist will probably be little helped by the process, except in young children, where the bones are still partly cartilaginous; whilst the majority of such conditions as could be portrayed in the upper and more bulky parts of the adult arm or leg can usually be readily diagnosed without any such help, even if it were forthcoming. There is some ground for hoping that assistance may be derived from the transparency of tubercular tissue in the diagnosis and localization of isolated foci in the bones of children. Cancers and other tumors are all equally transparent to the X rays, unless bony tissue is present, and possibly the diagnosis of a malignant tumor of bone might receive confirmatory evidence by this means. The transparency of cartilage also leads us to hope and expect that assistance will be obtained in the diagnosis of separated epiphyses and fractures implicating joints in children. As to conditions within the abdomen and chest, the thickness of the parts involved absolutely precludes the hope of any satisfactory results being at present obtained.

Our attitude, then, towards this new discovery must be one of expectant interest and, where possible, of active scrutiny. That it can be of real value in a certain limited number of cases there can be no doubt; but unless very considerable improvements are made in the technique it will be but little resorted to in practical work.

INFANTILE SCURVY.

C. S. MERRIMAN (*Kansas City M. Index, 1896, xvii, 104*) says that infantile scurvy is a constitutional disease caused by faulty nutrition resulting in deficient alkalinity of the blood. The disease is caused by the infant being deprived of fresh milk, by being fed on stale food, such as condensed milk or some of the various preparations on the market, or as the child grows older is deprived not only of fresh milk but of fresh meat, fruits and vegetables. There is something in fresh milk, fruits and vegetables that in the absence of a better name has been called an anti-scorbutic element. Children deprived of this element are liable to develop scurvy as well as other diseases. The symptoms of this disease are anemia, sallow complexion, pain on being moved, tendency to keep the limbs rigid, swollen, red or leaden color of the gums, which bleed easily; epistaxis, ecchymoses on various parts of the body, hemorrhage under the periosteum of the long bones, occurring most frequently in the femur; the limbs are swollen, skin tense, but not hot, indicating the absence of inflammation. These regions are very sensitive. The child will scream if he thinks you are intending to touch the parts, cannot bear to have the limbs moved although there is perfect freedom of the body where this swelling does not exist. The treatment of this disease is entirely dietetic. Fresh milk, fresh meat juice or meat, fresh fruit and vegetables. Reports two cases that occurred in his practice that will fairly represent this disease.

Case 1.—A little Italian babe, 7 months old, was brought to the clinic with both thighs badly swollen, very sensitive, would cry every time he was moved, slight fever, no teeth, but gums slightly swollen. Was fed exclusively on condensed milk. The first time it was seen it looked like a case of double hip joint disease. He prescribed paregoric to relieve pain, added cream to each feeding of milk, ordered a little meat juice once a day and orange juice once a day. Within four weeks it was entirely well.

Case 2.—A little girl, aged 2 years, with painful swollen thighs, three large spots of ecchymosis, one on each hip and one on the back, gums red and congested, no fever, appetite good. The child was comfortable when absolutely quiet. He learned that the child seldom drank milk or ate fresh meat. Her diet for some time had been bread and butter, sweet potatoes and bananas. He diagnosed scorbutus, corrected the diet, gave no medicine and in about five weeks she was well.

PERFORATION OF THE AORTA BY A BONY OUTGROWTH FROM THE SIXTH RIB.

A remarkable and uncommon cause of death was disclosed at a post-mortem examination recently made by DR. E. A. LIGHTBURNE, of London (*Lancet,—Univer. M. J., 1896, x, 85*), on the body of a boy, aged 12 years, who had died very suddenly without any previous illness. All the organs were perfectly healthy with the exception of a small portion of the left lung lying over the neck of the sixth rib on the left side. Further examination showed that a bony outgrowth from two to three inches in length sprang from the anterior surface of the sixth rib, at a point between the neck and the tuberosity. This spicule had penetrated the lung and the thoracic aorta, causing almost instant death by hemorrhage into the left pleura. The outgrowth was very firmly attached to the rib and had the appearance of having been there since birth. At the spot where the lung had been pierced there was hardening of the tissue, but no sign of abscess.

A CASE OF GONORRHOEAL ARTHRITIS IN A NEW BORN INFANT.

Esther M. Tyrrell (*Med. News, 1896, lxviii, 271*) reports a case in a well-developed female colored child.

Four days after birth a slight puffiness of one lid, with a scarcely perceptible redness, was noticed, and by evening, though the treatment had been quickened to hourly applications, the eyes were both in an alarming condition. The consulting ophthalmologist was called, and a most vigorous battle for the eyes begun. The lids were enormously swollen, and the slightest pressure would cause the pus to spurt several inches from them.

Four days after the appearance of the ophthalmia the wrists and dorsum of both hands were slightly swollen, the left being worse. They were bathed in a hot saline solution, but it was ineffectual, the swelling continuing until it reached from the finger tips to the elbows. The skin of the wrists and forearms was shining and edematous. The child appeared to be uncomfortable, without indication of severe pain, except for a few minutes at a time.

Applications of a 10-per cent. preparation of ichthyol with belladonna ointment were made and the hands and arms bandaged, the bowels thoroughly opened with calomel (gr. 3-10, in three doses), followed by sweet oil. Five days later the swelling had disappeared ; the eyes in the mean time had yielded to treatment. At the end of three weeks the patient was discharged in good condition, though the ophthalmologist continued treatment daily at the patient's home.

RESECTION OF THE HIP IN COXALGIA

A. Lambotte, of Antwerp (*Universal M. J., 1896, x, 65*), in a comprehensive monograph, presented 12 personal cases of resection, 11 successful, and gave a full history of tuberculous disease of the hip-joint and the measures employed for its cure (*Annales, tome iv, fasc. 3*). He stated that even the partisans of conservative measures agree that their results are far from brilliant. Among them, Bruns, of Tubingen, from an experience of 600 cases, recognizes that the method has serious inconveniences. The mortality, according to him, is 40 per cent.; the length of time required for treatment averages four years, the orthopædic results are sometimes very bad, and the restoration of function is never perfect. A similar confession from surgeons whose experience and dexterity cannot be questioned proves that resection of the hip gives even worse results. Yet resection has proved wonderfully efficacious in other joints, as the elbow, shoulder, and even the knee. What is the cause of the inferior results in hip-joint disease? Does the tuberculosis act differently from the tuberculosis of other articulations? Such a supposition is contrary to all pathological and clinical knowledge of the disease. Practice has sufficiently demonstrated that a solid and almost perfect articulation as regards function may be reproduced after operation. On the other hand, the objection to resection of the hip cannot be explained by the seriousness of the operation, for it is seldom followed by death when practiced according to the rules of modern surgery. Of 48 resections of the hip, Volkmann had only 4 deaths; Grosch, from a study of 166 cases, finds that resection practiced at the beginning of the suppuration is attended by no mortality. Dr. Lambotte expressed the opinion that the operation can therefore only have been abandoned on account of the persistence of suppuration, fistulæ, and the mediocre orthopædic results obtained. He formulated the following conclusions: 1. Conservative measures should be reserved for the first stage of coxalgia. 2. Surgical intervention is indicated as soon as pus forms in the articulation. 3. In non-suppurating coxalgia intervention is indicated if the pain and deformity prove rebellious to treatment by continuous extension. 4. A bloody operation is never contra-indicated by the extent of the local lesions. 5. Disarticulation of the hip should never be practiced at the outset. 6. The best method for total resection is the longitudinal external incision. 7. Vertical division of the trochanter is very useful as the first stage of the resection. 8. In the child the cartilaginous trochanter should always be preserved intact. 9. The danger of resection, when practiced at the beginning of suppuration, is almost *nil.* 10. Resection is the less serious as it is the more radical. 11. In order to insure complete and definite cicatrization all the tuberculous tissue must be extirpated. 12. In suppurating coxalgia resection gives better functional results than the conservative method. 13. Mobile nearthrosis after resection is better than ankylosis. 14. Extensive resections of the acetabulum have no value from an orthopædic point of view. 15. In the child subtrochanteric resection with preservation of the trochanteric cartilage gives orthopædic results identical to those of simple cervical section.

HEMORRHAGIC DIATHESIS IN THE NEWBORN.

FINKELSTEIN (*Berliner klin. Wochenschrift,—Am. J. Med. Sc., 1896, cxi, 391*) reports the case of a newborn infant dying of the hemorrhagic diathesis. In the organs a specific bacillus was found, cultures of which caused a typical hemorrhagic diathesis when injected into rabbits. The organism resembled the one found by Kolb in three cases of purpura hemorrhagica, and called by the latter b. hemorrhagicus. In Finkelstein's case the mother was syphilitic, but the author looks on the specific disease not as the direct cause of the hemorrhagic diathesis, but only predisposing to the latter process, in which pyæmic or septic infections bring about the characteristic changes.

THE OVERDUE REPORT ON ANTITOXIN.

In an editorial (*in the Practitioner, 1896, lvi, 229*), the following appears:

The delay in the issue of the report on the antitoxin treatment of diphtheria in the hospitals of the Metropolitan Asylums Board may be unavoidable, but it is none the less unfortunate. Is it surprising that the apparent coyness of the Board about publishing their figures should be taken to mean that the results are the reverse of brilliant? The profound secrecy in which it has been sought to shroud the whole business is, I am convinced, a mistake from every point of view. It looks as though there were something to conceal, and thus gives the enemy occasion to blaspheme ; it makes people chary of submitting their children or themselves to the treatment, and it makes practitioners timid in using it, with the possible result that lives are lost which might otherwise have been saved. The large majority of medical men keep perfectly open minds on the subject, and only want to get at the truth. Both the profession and the public have reason to complain of the tardiness of the Board in issuing its report.

In the absence of official information the public takes what it can get from such sources as Mr. Demetrius C. Boulger's article in the *Contemporary Review*. This sapient individual is certain that he was inoculated with serum from a glandered horse, and he positively affirms that "the authorities, after ridiculing the notion, had been constrained to admit that serum had been used from horses suffering from that disease." It would be interesting to learn where and when they made this admission. Mr. Boulger states that he has reason to think that when the special report of the Metropolitan Asylums Board is issued it will show a higher rate of mortality for the "antitoxined" patients than for those not so treated. Mr. Boulger seems to suffer from a constitutional incapacity to distinguish between assertion and proof; but his article here and there shows distinct traces of medical inspiration, though of a questionable character, and that such a statement should be made in a high-class magazine without, so far as I know, eliciting any contradiction is likely to be disquieting to the public opinion. Like Ajax, we pray for light, and the Metropolitan Asylums Board cannot send an answer to the prayer too quickly.

SERO-THERAPY PER RECTUM.

CHANTEMESSE (*Universal M. J., 1896, x, 68*), called attention to the fact that in the early days of sero-therapy the method was only utilized in the treatment of diseases (diphtheria and tetanus) where the specific germ does not exist, or exists only exceptionally, in the blood of the patient. The only inconvenience of the subcutaneous injection was a slight pain, some erythema, or urticaria. Of late the method has become generalized, and is employed more and more to combat diseases characterized by the presence in the blood of the specific micro-organisms. In these cases the serum injected is, as a rule, unirritating. In certain rare instances, however, the part chosen for the injection becomes the seat of intolerable pain, much swelling, and even abscess. M. Chantemesse has satisfied himself that these complications are not due to the impurity of the serum, but to an afflux to the part of a crowd of leucocytes filled with germs. The resulting abscess is endogenous in origin. He has seen such abscesses develop after the injection of antistreptococcous serum. In order to obviate these inconveniences M. Chantemesse has in twenty cases injected the serum into the bowel. He states that absorption is thus easy, and exempt from the inconveniences above mentioned. The bowel is first washed out with an ordinary water enema, and the serum is then introduced through a gum-elastic catheter, twenty centimetres long, attached to a syringe. It is claimed for the rectal method that it is as efficacious as the ordinary or subcutaneous, the same feeling of *bien-etre*, the same fall of temperature, etc., occurring in one as in the other. Is the protective power of a dose of serum absorbed by the intestinal mucous membrane equal to that of the same dose introduced into the areolar tissue? M. Chantemesse is inclined to answer in the affirmative, but he suggests the advisability of further researches on this head. In cases of serious erysipelas he has, without any inconvenience whatever to the sufferer, injected into the bowel in a few days as much as 200 or 300 cubic centimeters (6½ to 9½ ounces) of serum. A local application of great value in erysipelas is serum mixed with five times its weight of lanolin. The pain, redness, and swelling are quickly reduced by this ointment. Roux's serum employed as an enema in three cases determined results as satisfactory as when administered in the ordinary way.

A CASE OF BRONCHO-PNEUMONIA WITH SECONDARY ACUTE MENINGITIS DEVELOPING ON THE THIRD DAY IN AN INFANT TWO MONTHS OLD—RECOVERY.

CONRAD P. KORNREICH reports (*Med. Rec., 1896, xlix, 459*) this case: D. M——, male, aged two months, family history good; came under my care January 9, 1896. On examination there were areas of dullness all over the right lung, a short, hacking cough, rapid and shallow breathing, rapid and feeble pulse, some cyanosis, and a temperature of 103½° F. The usual treatment was prescribed, with persistent counter-irritation over the chest in the form of mustard plasters. Stimulants in the form of strychnine and cognac were persistently administered. The child apparently responded to this form of treatment until the evening of the third day, when I was hurriedly summoned and informed by the mother that the child had just had a severe convulsion and vomited severely.

On inspecting the little one the pupils were seen to be considerably dilated; there was tenderness along the back of the neck;

there was constant twitching of the muscles of the back of the head and neck, of the face, and of the arms. That night the child was very restless and apparently seemed to be in pain, for it tossed its little head about and constantly moaned, keeping this up for fully forty-eight hours.

The following morning photophobia and painful hearing had developed. I ordered ice-bags to be continuously applied to the head, applied two leeches, one to each temple, and administered internally twentieth-grain calomel tablets every half hour, bromides and chloral for the relief of the pain and restlessness. This treatment was adhered to for five days, after which the acute symptoms gradually subsided, with rapid and complete recovery resulting. This case is reported because of recovery following its occurrence in so young an infant.

ABDOMINAL SECTION PERFORMED SUCCESSFULLY ON AN INFANT.

CHARLES B. KELSEY, in a letter to the *N. Y. Med. Journ., 1896, lxiii, 387*, says: "Quite recently, at the Post-Graduate Hospital, I operated in a case of acute intussusception in a child aged *three months.* The caput coli was presenting at the anus, and the symptoms had existed only twenty-four hours. A laparotomy was done, the tumor was reduced, and an uninterrupted recovery followed. The case is only remarkable from the fact of recovery from such an operation in so young a child.

"I have corresponded with Mr. Frederick Treves, of London, on the subject, and he writes me as follows:

"'The statistics in my book, to which you are good enough to allude, are very much out of date now. More recent figures give thirty-four cases, bowel reduced, twelve recoveries; thirty-nine cases, bowel not reducible, one recovery; total, seventy-three cases, thirteen recoveries.

"'I cannot at this moment recall a case of successful operation in a child of three months or under. The mortality must be exceedingly high, and I think it very probable that your case may stand alone.'

"If any of your readers know of any similar result in a child of such age I am sure it would be of interest to the surgical world to have a record of it, and it is in the hope of calling out any such result of operation that I venture to address the *Journal.*"

A SUCCESSFUL OPERATION FOR HERNIA ON AN INFANT.

F. W. Ferguson (*Med. Journ., 1896, xliii, 422*), reports this case: On the 30th day of May, 1892, at 2 a. m., without assistance, except from the father of the child, I operated in a case of strangulated oblique inguinal hernia. The truss that I had fitted the child with previously had been left off the day before, and about 9 p. m. on the 29th vomiting began and continued until the hernia was reduced.

Under chloroform anæsthesia I could not reduce it as I had done a month before, and after short preparations I cut down, opened the sac, and replaced the cæcum and appendix in the abdominal cavity. This child, a boy, was born on the 21st day of the previous January, and was 129 days old.

The recovery was not eventful; it was complete in a week.

PSEUDO-BULBAR PARALYSIS IN INFANCY.

Kyssele (*Universal M. J., 1896, x, 70*) reported a case of pseudo-bulbar paralysis in a female child, 3 years of age, born healthy, the only anomaly being pronounced flexion of the fingers and toes. Very soon after birth the parents noticed that the child nursed imperfectly and that the tongue was never protruded. With this exception she developed normally. When about twelve months old she had an acute disease, lasting about three months and diagnosed as typhus. This illness was followed by great weakness and the difficulty of deglutition became more pronounced. The child has never spoken.

On examination it was seen that the tongue could be moved only with great difficulty; there were copious salivation and an unpleasant odor from the mouth. The bones and muscles were well developed; there were no traces of rachitis; nutrition was poor; the mucous membranes normal in color; the gums were swollen, hyperæmic and bled easily. The internal organs were healthy, hearing and sight normal. A non-atrophic simple paresis of the two lower branches of the facial nerve also existed, especially pronounced in the orbicularis muscle of the mouth. The child could not retain food or make a blowing movement.

The upper branches of the facial nerve were normal, but the hypoglossal nerve was paralyzed on both sides. The muscular contraction of the facial nerve was quite normal, respiration free, but phonation was disturbed. The extremities were very rigid, but the electrical reaction was preserved. Cutaneous and tendon reflexes were exaggerated, especially in the lower extremities. The feet were in a position of equino-varus. The child could stand upright if supported, but was absolutely unable to walk. She suffered from occasional incontinence of the urine. Appetite was good. These symptoms, according to the author, indicate bulbar disturbance, with diplegia of the extremities, but without atrophy or change in muscular contractibility. It was thus not a case of true bulbar paralysis, but a pseudo-paralysis resembling Berger's congenital paralysis.

Mouratoff confirmed Kyssele's diagnosis and thought that the pseudo-paralysis had some connection with the acute disease from which the child suffered when a year old. Though the condition was incurable he advised section of the tendo Achillis to allow the child to walk.

THE VALUE OF CREDE'S METHOD IN THE PREVENTION OF OPHTHALMIA NEONATORUM.

R. **Kostlin** (*Arch. f. Gynaekol., Am. M.-S. Bull., 1896, ix, 432*) has collected elaborate statistics from the large clinics of Europe and America showing the prevalence of ophthalmorrhea neonatorum before and after the use of Credé's method of dropping 2 per cent. solution of nitrate of silver into the conjunctival sac of new-born babies.

Without prophylactic treatment ophthalmorrhea was present in from 3 to 50 per cent. of the cases confined in the various clinics, the average being about 10 per cent. Since the introduction of Credé's method, 24,724 cases show that the percentage has fallen to 0.655.

Various attempts have been made to find something to supplant nitrate of silver. Carbolic, which was first used, was discarded on account of bad results.

Bichloride of mercury has been used in something over 2,000 cases, and gives results as good or better than Credé's method, but has the disadvantage of causing considerable irritation. **Stratz** reports 0.43 per cent of ophthalmorrhea among 460 cases, while catarrh was present in 1.8 per cent., and irritation in 18.3 per cent.

Irrigation with sterilized water gives results less satisfactory than either nitrate of silver or bichloride of mercury, and the danger of injuring the eye is quite as great as in either of the other methods. **Hoffmeyer** reports one case of severe corneal ulcer from washing the eye with water.

Trichloride of iodine has been tried in several hundred cases, but gives results even less satisfactory than any of the above methods.

The author thinks that silver nitrate gives the best results of all the methods yet tried, and that it has been used in cases enough to establish its value beyond a doubt. It is so easy of application and harmless in its action that it may be used as a routine by midwives.

Regarding the time of infection, he thinks it takes place during the passage of the head through the parturient canal, and not from material adhering to the eyelids or introduced into the eyes by water during the first bath, and supports his opinion by reporting several cases of prolonged labor in which children were born with well-established ophthalmorrhea. Any method which simply cleans or disinfects the eyelids at the time of birth is not scientific, and is bound to give poor results.

The disadvantages of Credé's method are very unimportant. Corneal affections are not observed, and irritation is seen less often than with other methods. The eyes are not rendered especially liable to a late infection, and, when a late infection does occur, it usually means that the infection was already present in the eyes, but development of the germs was retarded by the silver nitrate.

CHRONIC MIDDLE-EAR SUPPURATION WITH HAEMORRHAGE FROM THE INTERNAL CAROTID, ARTERIAL THROMBOSIS AND CEREBRAL ABSCESS.

At the New York Surgical Society, R. ABBE related the case of a child, aged 2½ years, who had suffered with otorrhœa for about a year, when sudden profuse hæmorrhage occurred; trephining was performed and nothing discovered, but blood welled up on introducing a probe down the meatus; as the haemorrhage continued the jugular vein was ligatured and the lateral sinus opened and plugged. At the post-mortem a small loose sequestrum was found in the inner plate of the tympanic cavity, adjacent to the carotid artery, which was found eroded and blocked by thrombus, as the result of which a large abscess had formed in the occipito sphenoidal lobe containing two ounces of pus.

* * *

Correspondence.

PARIS LETTER.

An Improved System of Incubators.—The latest attraction of the Paris boulevards is an exhibition of an improved system of incubators which have recently been introduced to the capital, after a trial of several years by a philanthropic society of Nice. The premises occupied by this new hospital for premature infants consist of a shop on the ground floor, and its dependencies and the public are admitted on the payment of a small fee, which goes towards paying the general expenses. The inventor of *The Couveuses* in question, Mons. Lion, states that 130,000 of the children born annually in France die within the first few days because they are premature, and he claims that three-fourths of the number, at least 100,000, might be saved by proper management. There are ten incubators at the Boulevard Poissoniere, and since the place has been open five or six weeks ago no deaths have taken place, although they have been occupied by infants in all periods of premature viability. The Couveuse consists of a cage of glass and metal with sides half a yard in width and three-quarters of a yard high. The chief point of interest consists of an automatic heating apparatus, which by means of a metallic thermometer and arrangements of levers cuts off partially the supply of warm air when the temperature exceeds a fixed degree and allows a free entrance when the normal has been restored. The same metallic displacements can be made to ring an electric bell to call the attention of the attendants, but the automatic regulation of the temperature has been found so perfectly reliable that the complementary precaution has been found practically unnecessary. The greatest care is paid to antisepsis, the air being brought from the outside of the building by a pipe and filtered through cotton wool. When the children are fed they are taken into the back room which is separated by a glass partition from the main *Salle* and maintained at the higher temperature. There are three wet-nurses (for eight infants), and the breast is supplemented by the bottle and by nasal alimentation.

A very common fact is noticeable in the statistical report published concerning the operation of this incubator at Nice, showing what a great difference a few ounces of extra weight make in the chances of life. Of the 185 cases treated, with 137 successful results, the weight in entrance varying from 800 grammes to 2 kilogrammes, 900 grammes, no child survived who weighed less than a kilogramme. There were three between 800 and 900 grammes, five between 900 and 1,000 (a kilogramme); all of these died. But of the four that weighed between 1,000 and 1,100, only one died. This was, however, a lucky series, for the next two classes, 1,100, 1,200, and 1,200, 1,300 show more deaths than recoveries, 2-4 and 4-5, respectively. From 1,300 upwards the successes constantly exceed the failures, and from 1,900 grammes until the end of the classification at 2,900 there are only 4 deaths in 80.

"Methode des Congeneres" in the Treatment of Tuberculosis in Children.—Dr. Maurice Block is contributing a series of papers to the *Revue Medicale* on the Treatment of Acquired Tuberculosis in Children, by the injection of blood from a healthy brother or sister of the patient. The method is termed the *Methode des Congénères*, and is based on the possibility of communicating a presumed immunity from the one to the other. Whatever may be the rationale of the treatment, the cases are interesting. In the last issue there are notes of three :

(1) A child ten years old, no phthisis in the family except maternal grandmother ; two of the other children have died of tuberculosis. The diagnosis confirmed by Mons. Quenu was attenuated fungous arthritis. The arm was fixed at a right angle, and there was periarticular fluctuation and *empalement.* A cubic centimetre of blood, taken from a sister thirteen years of age, was injected. Three weeks later the arm had recovered an almost normal direction, the articular disorders, after some oscillations had disappeared, and the child had increased in weight and strength.

(2) The brother of the preceding now 16 months old; diagnosis of pulmonary tuberculosis after broncho-pneumonia confirmed by Dr. Jules Simon ; loss of flesh, poly-microadenie, persistent cough, diffuse bronchitis, weight 7 kilos 110 grammes at the age of six months.

On the 2nd of April half a centimetre of blood was injected, on the 9th the weight was 7,300, on the 11th 7,500, the 23d 7,700. At the present time he is perfectly well, some relapses of bronchitis during teething having yielded to ordinary treatment. There has been no cough for four months (a second injection was made of 1 centimetre on the 16th May).

(3) A child of six months, in which the diagnosis of tubercular

tracheo-bronchial adenopathy was made. There was dyspnoea, slight interscapular dullness and bronchial souffle.

On the 27th September half a centimetre of blood was given. The cough had disappeared by the 15th of October, and the child has since gained flesh. The details of this last case are too meagre to have much weight, but the first two, the diagnosis confirmed by an eminent hospital surgeon and physician respectively, are more encouraging. The injection is made with blood from the capillary circulation, and is injected as it is, not as it has been erroneously reported, minus the globules.

Serotherapeutics of Smallpox.—The latest application of serotherapeutics is that of the injection of the serum from a vaccinated heifer against smallpox. Mons. Bectere has found that it requires the introduction of a quantity equal to the hundredth part of the weight of the heifer to confer temporary immunity, or one-fiftieth to secure complete protection from subsequent inoculation of variolous virus. In man it is difficult to inject more than a fiftieth part of the weight, which would be about one and a half kilogrammes. The difference between the action of the serum and ordinary vaccine is that whilst the latter requires a period of incubation before the immunity which is permanent is established, with the serum the immunity is immediate, but depends for its completeness on the quantity injected. It has, moreover, the property common to these serums of rendering the organism rapidly unfit for the propagation of the virus, and so is indicated when the smallpox is already established. A number of adults have already been treated successfully, but it seems especially indicated in young children, in whom the disease is so much more fatal.

In a child twenty-one days old where the symptoms that had already developed led to an unfavorable prognosis, the serum was injected on the second day in the subcutaneous cellular tissue of the thighs and abdomen to the amount of one-twentieth of the weight. No general or local disturbance followed, and recovery ensued. A brother of this child, three years of age, treated in the ordinary way without injection of serum, succumbed.

OSCAR JENNINGS, M. D. (Paris).

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Announcement.

BRITISH MEDICAL ASSOCIATION.

SIXTY-FOURTH ANNUAL MEETING, CARLISLE,
July 28th, 29th, 30th and 31st, 1896.

Section H.—DISEASES OF CHILDREN.

President, - -	JAS. FINLAYSON, M. D., F. F. P. S., Glasg.
Vice-Presidents, - -	ROBERT SOMERVILLE, M. D., F. R. C. S. E. W. E. ASHLEY CUMMINS, M. D.

The following subjects for discussion have been decided on, and several well-known men have already promised to take part in the discussion of the first two. With regard to the other two subjects, there has been more difficulty in finding out those who are working at them, so that the secretaries will be glad of information on this point.

I.—What are the Elements of success and failure in Tracheotomy in Children?

II.—Sporadic Cretinism in this Country and its Treatment. (A Lantern Exhibition of cases, before and after treatment, has been promised by Dr. Rushton Parker, Kendal).

III.—Bacteriology of Infantile Diarrhœa.

IV.—Advantages and Disadvantages attending the use of Sterilized Milk.

All communications on the business of the section may be addressed to the secretaries. Photographs or, preferably, negatives, illustrating the treatment of Cretinism may be sent direct to Dr. Rushton Parker, Kendal, who will return them after procuring copies.

We are, dear sir,
Your obedient servants,
W. D'OYLY GRANGE, M. D.,
Moffat House, Clarence Drive, Harrogate.
CHAS. WM. GRAHAM, L. R. C. P.,
19, Portland Square, Carlisle.
Hon. Secs.

COLLECTIVE INVESTIGATION OF THE ANTITOXIN TREATMENT OF DIPHTHERIA IN PRIVATE PRACTICE BY THE AMERICAN PEDIATRIC SOCIETY.

The committee of this society to which this matter has been referred desires to place before the profession, for collective investigation, the subject of Antitoxin Treatment of Diphtheria, the cases for the investigation to be collected entirely outside of hospital practice and published as the report of the society.

Two points are to be made prominent: First, the length of time elapsing between the first appearance of the disease and the administration of the serum antitoxin. This is to be stated as accurately as possible, even to fractions of a day. Second, the severity of the disease as shown by (*a*) extent of membrane; (*b*) general prostration; (*c*) involvement of the larynx.

As every one knows bare figures may in no way adequately express the full facts; remarks are, therefore, called for, and it is hoped the contributors will give fully their impressions. A diphtheria case under antitoxin may do very well and yet the physician reflect at the end that it was one which might be expected to recover under any form of treatment. On the other hand, one requiring intubation may recover promptly and without even becoming much prostrated.

The laboratory investigators distinctly state that antitoxin acts in some way to prevent the damage to cells by the toxin of the bacillus diphtheriæ. After the toxin has fatally injured the cells—a period approximately set down for guinea pigs as three days—the antitoxin is not found efficacious to save the life of the animal. Furthermore, bacteriologists do not select decrepit guinea pigs or those enfeebled by disease, but healthly, half-grown pigs of a general average body weight. Hence, it is desirable that the constitutional condition of the patient shall be noted in every instance.

It is thought that family practice offers the only fair test of the efficacy of serum antitoxin treatment, and the most trustworthy statistics must be gathered from that source.

In these investigations we wish to bring together facts and opinions from cases which have what may be called a fair chance of demonstrating whether antitoxin accomplishes in the human body what experimentally it has been found to do with uniformity in animals.

We cordially invite the co-operation of members of the profession in this investigation, in return for which the society will mail to each contributor the full report when it is published. An abstract giving the main facts will, however, appear in the leading medical journals immediately after the meeting of the society in May.

Please fill out the accompanying blank and return it *at your earliest convenience* either to the president or the secretary of the society. Cases received after May 1st cannot be included in the society's report.

Please reply to the following inquiries; if it is not possible to answer all of them, answer such as are positively known, even if but two or three:

1. *Age?* *Sex?*
2. *Condition—Good? Fair? Bad?*
3. *Time in fractions of a day, if known, from first appearance of the disease to first injection?*
4. *Was diagnosis confirmed by culture?*
5. *Number of injections made?*
6. *Extent of membrane—Tonsils?*
   Nose?
   Pharynx?
   Larynx?
7. *Operation—Intubation?*
   Tracheotomy?
8. *Complications or Sequelæ—Broncho-pneumonia?*
   Nephritis?
   Sepsis?
   Paralysis?
9. *Result?*
10. *Remarks; including other treatment, kind of antitoxin used, general impressions regarding the case, etc.*
11. *Name of reporter*__________________________*M. D.*
    *Address*______________________________

PEDIATRICS.

Vol. I. MAY 15th, 1896. No. 10.

Original Articles.

EXAMINATION IN AND TREATMENT OF CHRONIC MIDDLE EAR SUPPURATION.

By ARTHUR H. CHEATLE, F. R. C. S.
Assistant Surgeon to the Royal Ear Hospital and Aural Department of King's College Hospital.

IT is not uncommon even now for the parents of a child to be told that a discharge from the middle ear will cease as the child grows older or when teething is finished, and that it would be dangerous to stop the discharge ; it is impossible to overrate the danger of such statements which have too often been responsible for loss of hearing and life. It should be impressed upon patients and the parents of patients that the discharge is a menace to life and hearing, and that the life is not insurable as long as it exists ; by so doing before treatment is commenced care will be taken in following directions, and patience, which is a great factor in successful treatment, will be assured.

It is also a common practice to merely order syringing without a proper examination, and even without any directions as to the way the ear should be syringed.

To treat the disease with success it is necessary, firstly, to thoroughly examine the auditory apparatus, nose and nasopharynx and the general health ; and, secondly, to give precise directions as to treatment, for on the home treatment a cure often wholly depends. With regard to the examination, the history must be gone into as to the cause, constitutional or otherwise, together with mode of onset and course ; the general health inquired into and a general examination being made if necessary. Before proceeding to local examination it is well to test the hearing power, both for the voice and a known distance watch, so that improvement after examination can be accurately determined. In children the watch will often be found useless, untrustworthy answers being given ; it is necessary then to rely on the voice test alone, simple questions being asked which a child can readily understand and answer at known distances ; even this seemingly simple method requires practice to be of accurate service.

The external ear and adjacent parts should then be examined for signs of complication, and if pain or tenderness is complained of greater care can be exercised in manipulating the auricle and in introducing the speculum. In children, as the meatus is shorter and straighter than in the adult, a speculum is not always necessary to obtain a view of the membrane ; drawing the auricle upwards and backwards being all that is required. On examining the deep meatus with or without a speculum and with reflected light the character of the discharge must be first determined ; if pulsation is seen in it as it lies in the meatus a more or less acute condition is present, the pulsation being communicated from the congested parts around ; on removing a small amount by means of a cotton mop it can be seen whether it be purulent, sero-purulent or muco-purulent, the second indicating a healing process, the last an acute or sub-acute condition ; whether blood-stained or brownly discolored, the former indicating the presence of a polypus or of granulations, the latter, if persisting on treatment, some progressive caries ; the odor should receive attention and it is occasionally useful to make a bacteriological examination. The meatus and middle ear should then be cleared from discharge by syringing or gentle mopping and the condition of the deep parts searchingly examined. If a polypus presents, gentle examination with a fine blunt-pointed probe should be made to ascertain as far as is possible the attachment of its base, its vascularity and degree of tenderness. Soft bulging of the superior and posterior bony meatal walls strongly suggests extension of the suppurative process to the antrum and mastoid cells.

General swelling and redness of the meatal walls means a diffuse inflammation.

In adults exostoses are sometimes met with which may prevent the free exit of discharge ; they may be readily recognized by their consistence when touched with a probe ; it must be determined whether interference is necessary, together with the site of the growth and its character.

The position, shape, size, edges and surrounding parts of a perforation, or of perforations, must be noted.

A perforation in Shrapnell's membrane as a rule denotes a tedious case, or at all events a difficult one to treat, as it means that the trouble exists in the attic, in which are situated the heads of the larger ossicles often found to be carious, and as the upper part of the middle ear is practically shut off from the lower part by the ossicles, muscles and folds of mucous membrane, drainage is incomplete. Perforation in the posterior superior quadrant is also often difficult to treat and should arouse suspicion of caries of the incus.

If granulations are seen their site of growth should be determined and examined with the probe for carious spots. The condition of the ossicles must be ascertained, whether lost, carious or displaced ; as before stated, caries should be suspected when the perforation is in Shrapnell's membrane or in the posterior superior quadrant. Caries of the external wall of the attic is occasionally present when the perforation is in Shrapnell's membrane and should be examined for with a bent probe.

The condition of the middle ear seen through a perforation should be examined as to the condition of the mucous membrane and bony walls ; and for the presence of what are called cholesteatomous deposits, which appear as white shining masses, composed of layers of epithelium with cholesterine. Adhesions binding down the ossicles or membrane must be noted.

The nose should be examined by anterior rhinoscopy for hypertrophic and atrophic conditions, deviations and spurs of the septum, polypi and suppurative diseases of the accessory sinuses. In children a good view can be obtained by pressing back the tip of the nose and using reflected light. Polypi are not so uncommon in children as was formerly supposed ; suppuration in the accessory sinus on the other hand is rare. The mouth, fauces and pharynx should be overhauled for carious teeth, enlarged tonsils and catarrh, the naso-pharnyx by posterior rhinoscopy for adenoids, catarrh and hypertrophy of the posterior extremities of the inferior turbinated bones ; if posterior rhinoscopy is impracticable, as it often is in young children, a digital examination must be made, but is better left to the end, as children often become unmanageable after it, and as some bleeding is naturally produced there is a risk of the blood being blown into the middle ear by the inflation practiced later.

Tuning fork tests should then be employed to exclude implication of the internal ear, a necessary thing as regards prognosis.

Inflation of the middle ear by means of Politizer's bag or Eustachian catheter must then be performed, to ascertain the potency of the Eustachian tube and any improvement in the hearing, which is then again measured. Finally if posterior rhinoscopy has not been successful rapid and gentle digital examination of the nasopharynx must be made.

Complications other than the few already mentioned must be excluded, suspicions of any would have been aroused during the foregoing examination; it is not proposed to enter into their consideration in this paper.

The examination having been completed and the exact condition ascertained as far as is possible, treatment is the next consideration. As before stated syringing is often ordered without any directions as to how it is to be done or as to what kind of syringe is to be employed, and as syringing is one of the most important methods of treatment no efforts should be spared to insure efficacy.

The syringe which will be found to work well is a common, straight, one ounce, glass one with a medium sized nozzle, or, better, if the patient's means will allow, a medium sized brass one with a Pritchard's bone nozzle.

As a general rule it is impossible for a patient to syringe his own ear; some one else should undertake it and if possible always the same person, who should be personally instructed by the surgeon. If the person who is to do the syringing cannot be seen and instructed the following directions should be given: The patient is to sit down, or if giddiness is produced (as it sometimes is by the syringing) lie down with the affected ear turned towards a window or a good light; the auricle is then gently pulled upwards and backwards, to straighten the meatus, with the fingers and thumb of the left hand, and the nozzle of the syringe being placed just inside the dark orifice which will be seen the stream is to be directed gently but firmly straight inwards, the syringing being continued until the fluid returns clear—of course the solution used must be pleasantly warm. Any fluid remaining in the ear should then be allowed to run out and the ear carefully dried.

With regard to syringing the nose, the same care in giving directions should be taken; if the patient is a child some one else must of course perform the operation, but it should be done by the patient if possible. The same model of glass syringe as the one used for the ear, but a separate marked one does very well. The nozzle of the syringe is first to be directed upwards to pass the elevated floor of the vestibule, then directed backwards and slightly downwards so that the stream may be gently syringed along the floor of the nose, syringing upwards often causing headache; if loud mouthed breathing is practiced the while so as to elevate the soft palate the stream will flow out of the other nostril and prevent choking.

If a stoppage from any cause exists on one side of the nose that is the one that should always be syringed, for if the free side be syringed there is a risk of the solution being forced up the Eustachian tube into the middle ear, owing to the prevention of free exit on the outflow side.

The solution used should be pleasantly warm, and directions should be given that the nose is not to be violently blown immediately after, as some of the fluid may be blown into the middle ear.

In cases of uncomplicated middle ear suppuration syringing night and morning, or if the discharge is very profuse more frequently, with an antiseptic solution such as carbolic acid 1-60 or 1-80 boracic acid, etc., will often suffice to bring about a cure; it does not so much matter what antiseptic solution is used so long as the syringing is done thoroughly; although sometimes a change is useful, some solutions being found to suit some ears better than others. Spirit instillations as an adjunct to syringing often help, especially if granulations are cropping up, combined with boracic acid powder. The following formula will be found suitable:

℞ Pulv. Acid. Borac. ʒ i;
Sp. Vini Rect. ℥ iii, misce et ft. lotio.

Ten drops are to be mixed with ten of hot water, so as to make the whole pleasantly warm, and poured into the ear from a spoon, the patient lying down with the affected ear uppermost, the instillation remaining in for ten minutes or so after syringing. If stinging is produced the instillation should be syringed out and again introduced; if pain is then induced it must be weakened or left off; on the other hand if it produces no discomfort the strength should be gradually increased, by lessening the amount of water, until used pure.

Spirit is often useful for syringing, especially towards the end of a case, to produce hardening, half a wine glassful being mixed with half a tumblerful of warm water.

As the discharge lessens the number of times the ear is syringed should be decreased, but the patient should not be allowed to leave off treatment until, syringing having been left off for several days, a cotton mop carefully passed down to the affected area returns quite dry; it is often difficult to determine by the appearance alone whether the discharge has quite ceased.

Politzerisation at intervals is necessary, as it not only clears the Eustachian tube and middle ear of discharge but improves the hearing and tends to prevent the formation of adhesions; the procedure can be performed by the patient himself, or by friends, after instruction.

In children often no purposeful help can be obtained in performing the inflation, nor is it necessary, for on account of the naso-pharynx being small and the Eustachian tube being wider, shorter and more horizontal than in the adult, merely emptying the bag into the nose with the nostrils well closed, will suffice; crying is a distinct aid in the procedure. If healing does not take place on treatment careful examination should be made to find a cause, caries of the ossicles being especially borne in mind. With regard to insufflation of powders, such as fine boracic acid, it is sometimes useful when the discharge is slight and the perforation large; it should never be practiced when the discharge is profuse or the perforation small, as the powder only clogs the perforation and meatus, preventing the outflow of discharge; the method must be carefully demonstrated to the patient's friends or the powder simply remains in the cartilaginous meatus. A quill with a piece of tubing attached as a mouthpiece, serves admirably for the purpose.

A method of treatment which has given good results is, to make an initial thorough purification of the middle ear and meatus by means of strong instillations of carbolic acid 1-20 or 1-40, after thorough syringing, and to lightly pack down to the affected area, with all antiseptic precautions, a plug of double cyanide gauze wrung out in 1-40 carbolic acid, so as to dissolve out the irritating soluble cyanides; the subsequent treatment is then that of an ordinary wound.

It is needless to say that careful watching is necessary, the plug being left out and the ordinary treatment adopted if pain or temperature supervene. The only drawback is that the case must be seen almost daily by the surgeon; but if the method is successful the time of treatment is so curtailed that time and expense are saved in the long run.

It is a common practice to wear wool in the discharging ear; as generally used, in small pieces packed tightly into the meatus, the plug prevents the proper outflow of discharge, and it is not uncommon to find several putrifying plugs packed down into the meatus, the patient having been under the impression that they had been removed. If the discharge is profuse it is better to place a large piece of absorbent wool lightly into the concha, not into the meatus, and to retain it in position by means of a black silk pad with strings passing round the head.

Patients often complain that although the discharge is getting less no improvement is taking place in their hearing; the fact that the hearing is of secondary importance to the cessation of discharge should then be impressed upon them.

Occasionally the hearing can be improved by the use of an artificial membrane ; unless both ears are badly affected or unless the occupation is such as to demand good hearing in both ears, the use of an artificial membrane is not to be specially recommended, as it is always a source of more or less irritation.

The cotton wick made of salicylic, or double cyanide wool, moistened in a warm antiseptic solution is certainly the safest and handiest form and should be tried under the circumstances mentioned above, especially if the patient always hears better directly after syringing.

No definite rule can be laid down as to the kind or position of perforation which is most likely to give good results, except that it is usually large and situated below the short process of the malleus.

Several trials should be made to make sure that the artificial drum is of no service, and it is often impossible to say in which particular position it will improve the hearing; the patient after some practice is able to place the wick in that position better than the surgeon; it should be worn for an hour daily for the first week or so, the time being gradually increased until it can be worn comfortably all day, being removed at night. A fresh one is prepared for each introduction.

If pain is produced it must immediately be left out for some weeks, and then cautiously tried again.

To make the wick the wool should first be pulled evenly out flat, then placed in the hot antiseptic solution and carefully rolled up, being made of such a length as to reach from the middle ear to the opening of the cartilaginous meatus, and should not by its thickness entirely occlude the meatus. A straight pair of untoothed forceps are used for its introduction.

To enter into the treatment of nasal and nasopharyngeal troubles associated with middle ear suppuration in this paper would occupy too much space; suffice it to say that in children adenoid vegetations require removal, the ear having previously been brought into as pure a condition as possible by syringing in order to reduce the risk of infecting the fresh wound to a minimum.

Enlarged tonsils, usually associated with adenoids, should be removed, either at the same time as or at a short time previous to the adenoid operation.

Hypertrophic conditions, if not yielding to astringent and alkaline applications, will require the cauterizing of the inferior turbinated bodies or removal with the snare ; this condition is frequently associated with adenoid vegetations and is immensely improved by their removal.

Atrophic conditions require alkaline* spraying or syringing ; carbolic acid mixed with the solution is found very beneficial *(Lotio. Alk. Throat Hospital, Golden Square Pharmacy).

The general health frequently will require tonics, cod liver oil, fresh air, etc.

A word of caution is necessary concerning the entrance of water into the affected ear during washing, as it may be the starting point of severe and even fatal complications ; a firm plug of cotton wool should be introduced into the meatus to prevent it. A patient with middle ear discharge should not bathe in sea, river or swimming bath under any circumstances whatever.

*Lotio Alkalina.
℞ Sodii Bicarb., gr. xii ;
Acid Carbol., gr. ss. ;
Aquae, ℥ i.

Grocers and the Sale of Medicines.—In a country where the laws regulating the sale of drugs by pharmacists are so stringent, it is strange that grocers should be permitted to sell them. We refer to the sale of candies and pastils of santonine by grocers. These famous vermifuge lozenges are a veritable poison, as every physician who is at all familiar with the effects of this powerful alkaloid knows. The law which forbids a pharmacist to sell twenty drops of laudanum without a physician's prescription permits a grocer to distribute santonine thus prepared by the pound. Many serious accidents have occurred in this way, and there are other new ones to be found in the *Journal de Medecine de Paris.* Dr. Leo, in a valuable article on the subject, also cites several. The same may be said of poppyheads, of which decoctions are imprudently made as sleeping-potions for children and invalids, not only in the country but even in Paris.—*Paris Letter in Med. Rec.*

INFLUENZA IN INFANTS AND CHILDREN.

SOME DIAGNOSTIC AND THERAPEUTIC HINTS.

By L. Fischer, M. D.,

Associate Professor of Diseases of Children, N. Y. School of Clinical Medicine; Attending Physician Messiah Home for Children; Attending Physician Children's Department German Dispensary, West Side; Attending Physician to Children's Department of the German Poliklinik, etc.

At various times, and chiefly when pneumonia, diphtheria and other infectious diseases predominate, we find a series of symptoms which frequently baffle us. They simulate by the pains in the limbs muscular rheumatism; again, the gastric and enteric symptoms will simulate gastro-enteritis, or the coryza and cough will remind the attendant of the onset of either measles or a severe form of bronchitis, possibly pneumonia. It is very infectious, the period of incubation very short, and unlike most infectious diseases, one attack does not protect from subsequent ones; that is, relapses are common.

The mortality is high; the disease is contagious and is frequently transmitted from an adult to the children in the household on the same day or within two or three days after one member has been stricken.

The disease is caused by a micro-organism which has been designated the "influenza bacillus," and has been described by R. Pfeiffer in the *Zeitschrift für Hygiene und Infections-Krankheiten*, and can be cultivated on agar containing hæmoglobin. The bacillus is found in the blood of infected children, but chiefly in the discharges from the nose, throat and lungs.

This germ was simultaneously discovered by Canon in 1892. It is a small organism, about the same diameter as the bacillus of mouse septicæmia, but only half as long. They are usually solitary, but may be united in chains of three or four elements. They stain rather poorly, excepting with such concentrated penetrating stains as carbol-fuchsin and alkaline methylene blue, and even with these the bacilli stain more deeply at the ends than in the middle, so that they appear something like diplococci.

For the demonstration of the bacilli in the blood, Canon recommends a rather complicated method. The blood is spread upon clean cover glasses in the usual way, thoroughly dried, and then fixed by immersion in absolute alcohol for five minutes. The stain which seems best is Czenzynke

℞	Concentrated solution methylene blue,	40 parts
	O. 5 per cent. solution eosine in 70 per cent. alcohol,	20 parts
	Distilled water,	40 parts

The cover glasses are immersed in this solution and kept in the incubator for three to six hours, after which they are washed in water, dried and then mounted in Canada balsam.

By this method the erythrocytes are stained red, the leucocytes blue and the bacillus, which is also blue, appears as a short rod or even as a dumbbell. The bacillus does not grow in gelatine or upon ordinary agar.

We encounter quite a difficulty in describing the symptoms, for the type of the attack alters from time to time, so that we must rely in our diagnosis on various factors, chiefly the one that influenza is epidemic at the time, and perhaps that other members of the household have suffered. The diagnosis must be made by exclusion in very young infants.

It need not surprise us that we find various types of this disease in infancy, namely, the form known as the gastro-enteric type and the pulmonary type, for we find that the so-called pneumonia diplococcus can and frequently does cause at one time an otitis, at other times a meningitis. It is in this manner that the influenza bacillus sometimes infects the lungs, causing either a bronchitis or a pneumonia, and at other times it will infect the gastro-enteric system.

The main pulmonary symptom is fever, the temperature rising to 102° F., and even 105° F. The child is heavy and drowsy, and appears to have pain in the limbs. The condition lasts a day or two, the temperature sinks and the child is well again. This is in the simple form of influenza, but if we have a more protracted course, the temperature may keep on rising in the evening, falling in the morning, for a week or two weeks before reaching normal. In the worst forms we may have an attack ushered in with a convulsion, with vomiting, with severe meningeal symptoms, and finally the child recovers without leaving any trace of this infection, so that these cases are really very puzzling, especially those in which we have a rise and fall of temperature with either mild pulmonary or moderate gastric-enteritic complications.

Older children have attacks similar to those witnessed in adults, that is, the neuralgic pains are less marked, but there is back-ache, at times rigors. The attack is always sudden, the temperature running up to 103° F. or more, there may be sore throat, headache, injected conjunctivæ and earache. Frequently the tonsils are enlarged and covered with small follicular points resembling diphtheria. The glands in the neck may be enlarged, secondary to the tonsilitis. An interesting point is that an eruption similar to scarlet fever may be present, and the rash disappears in a short time. Retro-pharyngeal abscess is a very frequent sequela to influenza, and occasionally empyema may be secondary to a severe attack of the grippe.

Let me illustrate: A child, R. F., 7 months old, was attended by Dr. A. Bienenstock on March 9th with a diarrhea and an acute bronchial catarrh. Two days later he found the lower lobe of the left lung consolidated and the bronchi full of mucus. The treatment ordered did not relieve the engorgement of the lungs. The child did not improve, but had a coryza, cough, suffused eyes, temperature 101.6; as Dr. Bienenstock told me, had all the appearances of a child about to develop measles. But an additional symptom, when the child was touched it commenced to scream.

I saw this case in consultation with Dr. Bienenstock, and found the entire left lobe consolidated and diagnosed influenza of the pulmonary type. I ordered salicylate of soda 3.0 with essence of pepsin 60.0, a teaspoonful every two hours. This child recovered in a few days, but an older child developed similar symptoms of coryza, cough, pains, tenderness on being handled, anorexia, suffused eyes, and in addition abdominal pains.

The interesting fact about these two children would hardly be made clear but for the point that the mother had been suffering with headache, cough, coryza, pains in the limbs and back for about a week. It was self-evident from the influenza present that the mother had infected the child, and about two days later the older child was infected from either mother or its younger sister.

Such cases can be enumerated by the dozens. On March 4th I saw a case in consultation with Dr. Samuel Friedman which was characteristic of a most malignant type of influenza, complicated by a pneumonia, and also by a typical meningitis; child about 2 years old.

Two days later, through the courtesy of Dr. L. Kohn, I saw in consultation a case of a mild type of a catarrh which extended from the nose and throat into the bronchi, simulating a croupous bronchitis, really a malignant form of influenza. Such cases occur so frequently that we must differentiate carefully, and resort to the process of exclusion in making the diagnosis.

The treatment of influenza is very simple. I invariably resort in all cases of influenza to the stimulating effect of a mustard foot bath, by taking about an ounce of the strongest mustard, putting it in water of about 90° F., and with this bathing the feet and constantly raising the temperature of the water by the addition of hotter water until the temperature reaches 110° F. The bath should continue for five minutes and be followed by gentle friction of the extremities, which must be carefully enveloped in hot towels or blankets. In addition to this, it is a good plan to aid diaphoresis by giving liquor ammonii acetatis, a teaspoonful every two or three hours for children 1 to 2 years old; one-half the quantity for children below that age. The drug most favored by me is salicylate of soda. I give one grain for each year of age, every two or three hours, depending upon the urgency of the symptoms, so that a child five years old would receive five grains every two or three hours, and a child 10 years old ten grains every two or three hours.

The ordinary rules of therapeutics apply in influenza as well as they do in all other diseases; thus, for example, the alimentary tract must be kept perfectly clean, and if there is not a good movement once in twenty-four hours, the compound infusion of senna should be given to a child in doses of three or four teaspoonfuls in three or four hours, and if this is not followed by copious stools, then an enema consisting of a half a teacup of glycerine and one-half teacup of warm water should be administered quite high into the rectum. By placing the child on his side this can be easily accomplished.

The diet should be bland, and solid food excluded throughout the course of an attack of influenza. The best mode of feeding is to give concentrated soups, farinaceous food, soft eggs, oysters, milk, broths, koumyss.

For the severe pains in the limbs I have found gentle massage, in some cases with vaseline, in others with alcohol, using the massage two or three times a day over the back, arms and legs.

Whilst stimulation is not called for, it is a wise plan to administer alcohol occasionally. But if the pulse is feeble, then I have seen good results following the administration of one-half teaspoonful of whisky in a teacupful of boiled milk, with the addition of the yolk of a raw egg in sugar. This milk punch, as it were, can be given in doses of two or three teaspoonfuls ice cold. In other cases Tokay wine may be required, and in influenza, more than in any other disease, we find that it is necessary to individualize the treatment.

Death from Antitoxin.—A case of death from the use of antitoxin is reported from Wheelersburg, O. On the 2ad of March a practitioner, who has had considerable experience in the use of serum, injected the usual prophylactic dose over the scapula of a sleeping child of five years. An hour before he was known to be in perfect health. In less than five minutes the doctor was summoned from an adjoining room to find the child dead.—*Med. News, 1896, lxviii, 415.*

FIBROID DISEASE OF THE HEART IN AN INFANT TWELVE MONTHS OLD—SUDDEN DEATH—GENERAL TUBERCULOSIS.

By George Carpenter, M. D.
Senior Physician to Out-Patients, Evelina Hospital for Children, London.

HAROLD E., aet. 12 months, was admitted to the wards of the Evelina Hospital on February 12, 1896, for disease of the hip joint of four months duration. In e ptember, 1895, the dorsum of the left foot and the left hand and wrist became swollen for about three days—there was an absence of redness, and the mother thought the child did not suffer any pain at this time. The child's maternal grandfather and paternal great-grandfather died of consumption. During life an examination of the heart and ungs did not reveal anything of importance. Whilst under observation his temperature was always above normal—the greatest rise

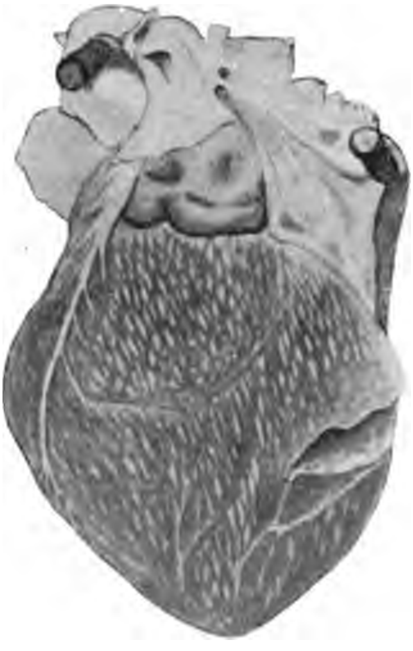

Fig. 1. Dr. George Carpenter's Case of Fibroid Disease of the Heart in a Child Twelve Months Old.

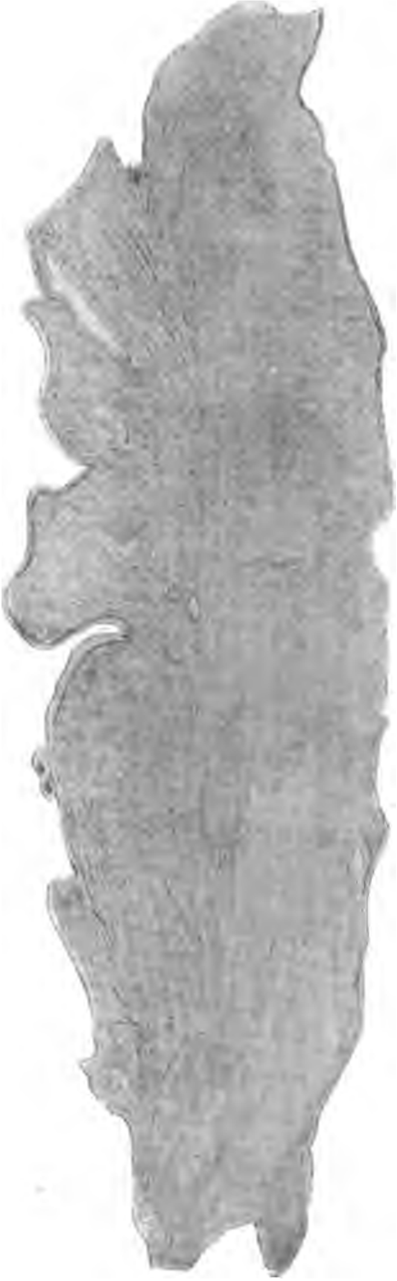

FIG. 2. Dr. Carpenter's Case of Fibroid Disease of the Heart. x10.

was 101° F. He died quite suddenly on February the 14th, some forty-eight hours after admission.

Autopsy—*Lungs.* Scattered miliary tubercles were found throughout both lungs, especially at the bases. The lymphatic glands, the liver and the spleen presented numerous miliary tubercles on section. The synovial membrane of the hip joint was thickened. *Heart.* The pericardium contained an excess of fluid—the surface was smooth. The left ventricle was dilated, and scattered through its wall were a number of white areas, some rounded, others long and narrow, and many of them seemed to pass from the pericardium to the endocardium. The muscular substance, where not involved, looked healthy. There were two or three small round spots of infiltration in the substance of the right ventricle. The valves were normal. There was a valvular orifice at the foramen ovale.

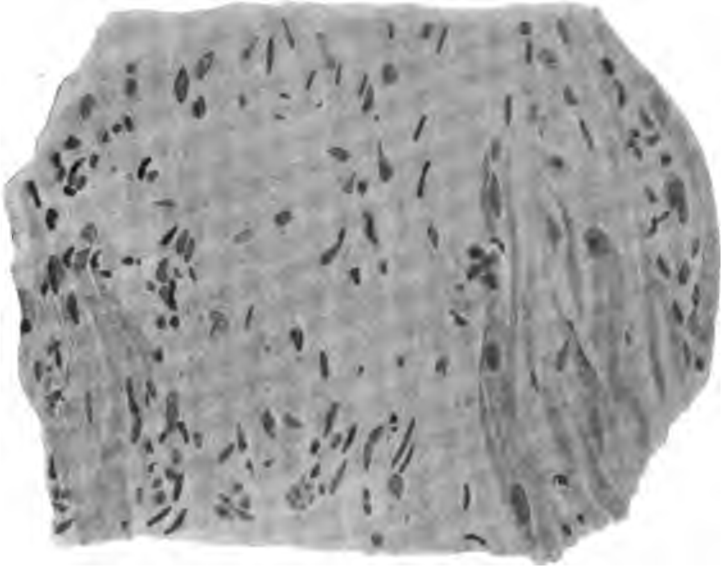

FIG. 3. Leitz Obj. 7, Oc. 1.

Microscopical Examination.—Areas of new growth invaded and broke up the muscle bundles, from pericardium to endocardium; they were of varying sizes and, when the microscopic sections were held up to the light, it was seen that the outer half of the heart wall had been involved to the greater extent. Under the microscope were seen :

1. Wavy bundles of fibro-nuclear tissue with elongated wavy nuclei, sometimes surrounding small islets of muscle tissue or invading the muscle bundles and separating straggling muscle fibres from their fellows, and, here and there, showing dense nuclear aggregation. Some of the muscle fibres thus isolated showed transverse striation, but in a few this appearance was lost and they were attenuated and opaque.

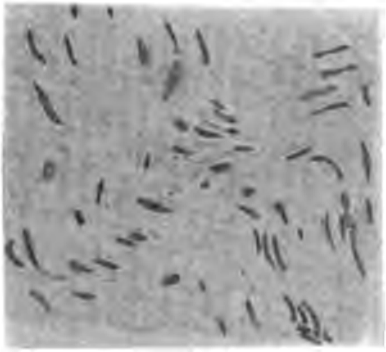

FIG. 4. Leitz Obj. 7, Oc. 1.

2. Areas where the connective tissue fibrillæ were not so marked, though the nuclei were numerous and stained very well indeed.

3. Areas of varying sizes with increase of irregularly shaped nuclei in the intermuscular fibrillæ. The muscle corpuscles in such, in some instances, appeared quite large.

4. Areas, though few and far between, of perfectly healthy muscle fibre and connective tissue.

5. The endocardium much increased in thickness, the pericardium, where not joining the sclerosed tissue, unaltered. Although the endocardium was thickened, the passage to it of sclerotic offshoots from the neighboring muscular fibres was not a feature, but a nuclear increase in these was not uncommon, together with an undue separation of them one from another. The thickening often appeared quite independent of, or out of proportion to, any underlying mischief.

Fig. 1 shows the left ventricle pinned out on a board, the infiltrated areas, depicted as white dots and streaks, are well seen.

Fig. 2 shows a microscopical section, slightly magnified, of the left ventricle reaching from pericardium to endocardium. The thickening of the latter and the extensive involvement of the muscular substance with new growth is well shown.

Fig. 3 is taken from an area which is highly magnified and which shows fibro-nuclear infiltration, the invasion of the muscle fibres with new growth and consequent attenuation of these and, to the right of the drawing, two fibres revealing opacity and loss of striation.

Fig. 4, also under a high power, is from an area where the fibrous tissue was most marked.

Fig. 5 shows muscle fibres which are but slightly involved by intermuscular increase of nucleation, but there is a very obvious collection of nuclei at the left side of the drawing—some of the muscle fibres are healthy.

Remarks.—When I first saw the specimen I thought the areas represented in figure 1 were tubercular, nor do the microscopical appearances disprove the original idea. The occurrence of tubercle in muscle is sufficiently rare to hinder the acquirement of knowledge as to the behavior of tubercle in muscular tissue, and this is especially the case when the part involved is heart muscle. The fact that tubercle can and does undergo fibroid changes in other organs, the lungs and testicles for example, is quite sufficient to render it at least probable that fibrosis might occur in the heart under similar conditions. The absence of caseating areas in no way opposes this view, for tubercle and syphilis in this respect behave very much alike; sometimes, in the latter, there is a gumma with caseation, sometimes an interstitial fibrosis; and so it is with tubercle and, admitting this, it is manifestly unwise to deny the tubercular origin of the lesion, seeing that there were tubercles in other parts of the body in some profusion. Chronic myo-carditis is exceedingly rare in children; and the extreme youth of this patient and the extensive area involved make the case one of unusual interest, quite apart from the interest which attaches to the true explanation of its causation. There was no evidence, clinically or otherwise, that the patient was suffering from congenital syphilis; but it cannot be said that he never had an attack of rheumatic fever—rare as it is to be able to diagnose this disease in so young a child—indeed, I think it might be fairly inferred, from the history of the case, that he did suffer from that disease in September, 1895, and if that be granted then it could not be denied that the cardiac mischief was not of rheumatic parentage.

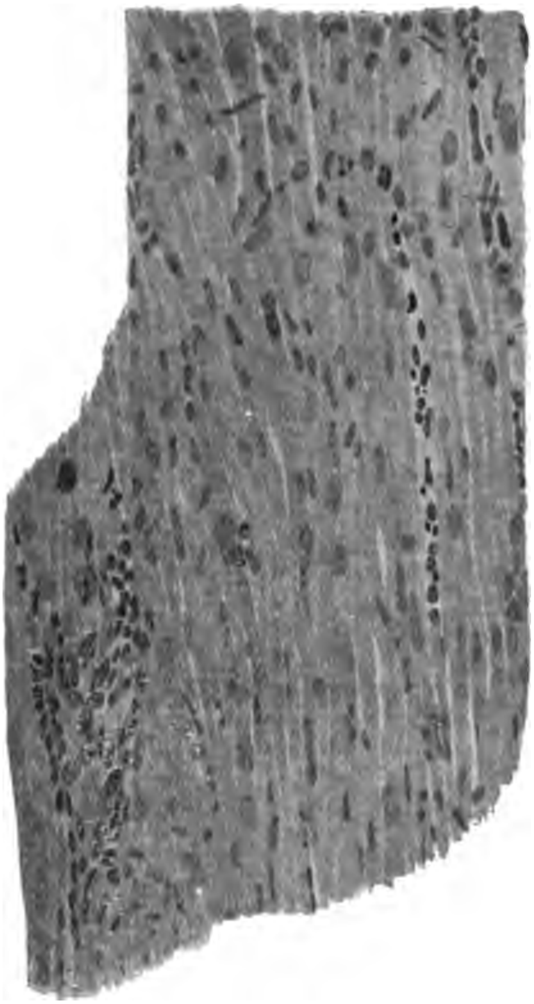

FIG. 5 Leitz Obj. 7, Oc. 1.

Whatever views may be held as to the cause of this disease in this particular case it will be admitted that the microscope, whilst capable of pointing out the nature of the change, is here unable to decide between the rival claims; and something may be said for and against either the tubercular or the rheumatic origin of the complaint—there can be no cavilling as to its rarity, and as to the propriety of the use of the term fibroid disease of the heart which, whilst accurately describing the changes discovered in the heart, is non-committing in the way of explaining its causation.

If it be admitted that the chronic myo-carditis was tubercular then this disease must be added to the list as a possible cause of that extremely rare disorder in children, fibroid disease of the heart.

Boy Poisoned by Transfer Pictures.—An adjourned inquest was held at Seaforth, Liverpool, on Friday, 20th inst., on the body of a boy of four who died recently from irritant poisoning. The lad had been using "transfer pictures," highly colored devices sold in toy shops, popular amongst children. These are made in Germany, and are usually licked with the tongue and pressed on the hand, the colored impression being thus transferred. Since the first sitting of the jury an analysis of these pictures was made, with the result that they were shown to contain lead. The jury found this was the cause of death, and made a presentment that the sale of such pictures should be stopped.—*Pharm. J., 1896, p. lxix.*

A Physician's Heroism.—We read in the *British Medical Journal* that Dr. Ernest Helby saved a child's life at Croyden Fever Hospital by sucking the diphtheritic membrane from its throat after tracheotomy had been performed. The doctor contracted the disease and for some time his life was in danger. He finally recovered under antitoxin treatment. We scarcely know whether such action is worthy of praise or blame. We become so accustomed to universal selfishness that the discovery of a hero comes as something of a surprise. The highest type of self-sacrifice, the willingness to risk one's own life for that of another, cannot fail to call forth our highest admiration. However, such instances as this—the results are not always as felicitous—raise a question in casuistry. Is not the life risked or sacrificed worth more to humanity than the life saved? Is it right for a physician to risk sacrificing those dependent upon him? We would not be chary of praise, but we suggest that the necessity of such risk must be decided by the individuals personally concerned.—*Med. Rec., 1896, xlix, 558.*

PRACTICAL NOTES.

Bone Marrow Failing in Pernicious Anæmia.—One is not surprised, however, when one hears of bone marrow failing in pernicious anæmia, since it is not obvious how the marrow is expected to act. Bertram Hunt gives notes of three cases of pernicious anæmia unsuccessfully treated with bone marrow. During the time it was tried there was no increase of corpuscles or of hæmoglobin in the blood of any of the patients. Although bone marrow failed, one of these cases is interesting as an illustration of the marked improvement that sometimes follows the use of arsenic. The patient was given Fowler's solution, first in quantities of nine minims a day, rapidly rising to seventy minims. The hæmoglobin rose from 26 per cent. to 48 per cent. in three weeks. The large doses of arsenic caused the development of some peripheral neuritis, and the drug was discontinued. The improvement, however, was maintained, and the hæmoglobin reached 75 per cent. of the normal at the end of another fortnight, when the neuritis had apparently disappeared.—
—*Bristol Med.-Chir. J., 1896, xiv, 48.*

Epilepsy.—The following formula was recommended by Brown-Séquard as a remedy for epilepsy :

Sodium bromide,	gr. 180.
Potassium bromide,	gr. 180.
Ammonium bromide,	gr. 180.
Potassium iodide,	gr. 90.
Ammonium iodide,	gr. 90.
Ammonium carbonate,	gr. 60.
Tincture of calumba,	℥ 1½.
Water, sufficient to make	℥ 8.

Mix. Adult dose, 1½ teaspoonful before each meal, and 3 teaspoonfuls at bedtime.—*Practitioner, 1896, lvi, 448.*

Foreign Bodies in the Ear.—The following remarks from the article, "Otology," by Dr. C. H. Burnett, in *The American Year-Book of Medicine and Surgery, p. 835,* are intended for the guidance of the general practitioner: In regard to foreign bodies in the ear, the first and important injunction is to be sure that there is a foreign body in the ear before endeavors are made to extract it. Much damage has been done to the ear by groping after a foreign substance said to be in the ear which was not there and never had been there. In no case should any one not a specialist use any form of surgical instrument to extract a foreign body from the ear. If a living insect has entered the ear, a few drops of sweet oil will smother it, and it may then be syringed out with warm water. If an inanimate substance has been placed in the ear, as is often done in play by children, syringing with warm water will generally remove it if the ear has not been previously scratched by probes or forceps. If the latter has been done, the child should be etherized and the foreign body removed by an expert. There is no hurry demanded in such cases. The foreign substance had better be left in the ear indefinitely than to apply rough measures for its removal. What a child can slip into the ear in play can be easily removed if the physician first called knows how to do it. Unless he knows what to do and what not to do, he had better do nothing. It will be better to send the patient to the nearest aurist than to do the wrong thing for relief. Death has occurred by unskillful endeavors to remove a foreign body from the ear of a child. Not the foreign bodies in the ear, but the improper treatment is the cause of death in such cases. The instillation of oil into the ear for the removal of foreign matter from it is futile. If, as sometimes happens in tropical countries, the larvæ of flies are present in the ear, a drop or two of chloroform or ether should be put into it.—*Practitioner, 1896, lvi, 444.*

Itching, which is so often found in connection with eczematous conditions of the anal and genital regions, can be greatly relieved, according to Dr. Cantrell, by the use of an ichthyol wash ranging in strength from 1 to 2 drams to the ounce of water.—*Phila. Polyclinic, 1896, v, 136.*

Scarlatina Antitoxin.—Dr. A. BAGINSKY has made a report upon fifty-seven cases of scarlatina treated at the Kaiser Friedrich Hospital by the Marmorek antistreptococcus serum. This serum, a supply of which had been sent to the speaker from Paris by its inventor, acts only against the complications of scarlet fever which are due to the presence of the streptococcus. According to Marmorek, who has treated one hundred and three cases with the serum in doses of from ten to eighty grams, the remedy not only cures the complications but prevents their occurrence. The results of Baginsky's experiments with the serum were as a rule favorable. With the exception of a few cases in which the remedy had absolutely no effect, for example, that of a child with glandular suppuration, in whom sixty cubic centimetres had been injected, most of the patients recovered without any complications. The number of cases is yet too small to allow of a definite opinion concerning the value of the antitoxin, but the remedy was employed sufficiently often to show that it is without injurious effects, since no untoward symptoms, such as collapse and the like, were observed.—*Med. Rec., 1896, xlix, 570.*

Diarrhea.—In cases of gastro-intestinal disturbances in children, when there are evident symptoms of intestinal indigestion, with mucous stools and diarrhea, the following combination is given by Dr. TAYLOR:

Lime water................	equal parts.
Cinnamon water............	
Aromatic sirup of rhubarb...	

Mix.

DOSE.—According to the age of patient.

In many cases it has been found necessary to stop all articles of food that will ferment, milk included. Many of these patients do best on a diet of animal broths alone. Well made clam broth is particularly good.—*Phila. Polyclinic, 1896, v, 156.*

The Evils of Bakeshops.—At a meeting of the Ladies' Health Protection Society, held recently, Mr. Thimme, editor of the *Bakers' Journal*, read by invitation a paper on "The Evils of Bakeshops," in which he said that there were two thousand bakeries in this city, most of which were located in cellars that had never been originally intended for such use, and they were not only badly ventilated, but were the favorite haunts of cockroaches, spiders, mice, and even rats. Coal dust and other matter floated around the places, making them unhealthy as workshops and rendering it altogether impossible that wholesome bread could be produced under such conditions. Bakeshops were often the sleeping-places of the employees, and were not more than six feet from floor to ceiling. As an evidence of the danger of such places, the speaker said that some samples of bread from these bakeshops had been found to contain thirteen varieties of living micro-organisms. In case of contagious disease among the occupants of these cellars, there was no reason why the elements of contagion might not be distributed broadcast through the city in the bread there baked.—*Med. Rec., 1896, xlix, 561.*

Editorial.

RECENT ADVANCES IN ANTENATAL PATHOLOGY.

IT was inevitable that antenatal pathology should lag in the rear of the more immediately practical branches of medical study. The investigation of the diseases and deformities of the unborn infant was unavoidably difficult, and the few workers who gave themselves for a time to such researches made no discoveries of such importance as to tempt others to follow in their footsteps. The subject also was financially unprofitable, for manifestly the health of the father or mother, or even of the baby of a year, was of infinitely greater immediate value than was that of the infant in utero. There was no call for a specialist in the diseases of the unborn infant.

There are now signs that brighter times are in store for the student of antenatal maladies. In one European nation, at least, the practically stationary condition of the population is enhancing the value of foetal life, and strenuous efforts are being made to save alive even premature and weakly infants. Where large families are the rule one or two abortions pass unregarded, but where children are few even six months' foetuses have a value. It is necessary, then, to know about antenatal disease if we would conserve antenatal life.

This, however, is not all. For some years back signs have not been wanting which have shown that antenatal pathology is not an isolated and obscure branch of study interesting only to the curious, but is an integral part of the larger division of general pathology and is governed by the same laws, whilst exhibiting a diversity of phenomena. It may, therefore, be confidently anticipated that its investigation will throw light, not only upon its own problems, but also upon the wider questions which interest pathologists, physicians and surgeons alike.

From the point of view of its pathology, antenatal life may be divided into three periods. The first is the time before the union of the ovum and the spermatozoon is effected; during this period the germ-cell and the sperm-cell, like the other cellular elements of the maternal and paternal organism, may have morbid tendencies impressed upon them, and the results of the pathology of this sort of dual pre-existence may be found in the diseases of intra or of extra-uterine life, even of advanced extra-uterine life. The second period is that which extends from impregnation to the appearance of physiologically active organs in the embryo, or, roughly speaking, till the second month of pregnancy. During this time, also, morbid causes may be at work, and we have reason to believe that their results are solely, or nearly solely, teratological. The third and last period of antenatal life extends from the appearance of individually active organs in the embryo to the birth of the full-time foetus: this is the epoch during which pathological conditions lead to the development of foetal *diseases* as distinguished from foetal monstrosities.

There is good reason to believe that the same morbid causes are in action during antenatal as in post-natal life, and in the first and second periods of antenatal life just as in the third and last epoch of it; but, whilst the causes are the same, circumstances prevent the results being similar. In the third or foetal period of antenatal existence the same kinds of diseases are met with as in extra-uterine life—there may be inflammations of the various organs, the germs of disease may set up tubercular or syphilitic changes, and the infectious fevers may be met with in various stages of evolution—but there are certain differences, not as yet very fully understood, which are doubtless due to the peculiarities of the environment of the foetus at this time. The scarlet fever of the foetus is the scarlet fever of the adult, as far as *cause* is concerned, although the fact that the body of the foetus is surrounded by the liquor amnii and not by the atmosphere may modify certain of its *manifestations*. Can the same generalization be made about the pathology of the second period of antenatal life, the embryonic? I believe that it can. For many years back it has been known that monstrosities can be artificially produced in the chick by altering the normal incubation conditions; the researches of Dareste, Lombardini and others have definitely shown this; but it is only within quite recent times that Féré * has shown that the same results can be produced by injecting into the eggs pathogenic germs and their toxines as well as such purely chemical substances as alcohol, ether, acetone, and nicotine. That is to say, the substances which act as the causes of disease in extra-uterine and in later intra-uterine life act as the causes of monstrosities in early intra-uterine life. The same causes are in action in both periods; but whilst when acting upon the body with its organs functionating they lead to disease, when acting upon the embryo, with its organs in process of formation, they produce teratological effects. The causes are the same, but in the one case the results are *pathological*, in the other *teratological*. What produces a *disease* at the one time leads to the formation of a *monstrosity* at the other. Teratology, then, *is* the pathology of the embryo: as Duval † has said, "La teratologie est donc bien un chapitre, mais un chapitre tout particulier, de la pathologie." This is a most important generalization, for it brings the study of teratology out of its obscurity and places it in line with the rest of pathology; and it enables us to experiment with the causes of disease in cases in which the organism acted upon is simpler and more completely under control. Possibly, also, it will be found that the causes which are most powerful teratogenically are also most active pathogenically; but this can scarcely yet be affirmed absolutely.

Can we now extend this generalization to what may be called the pathology of the germ and sperm cells? It may be said that there is at least some evidence pointing toward this conclusion. Special allusion may here be made to the researches of Charrin and Gley (*Arch. de physiol.*, Jan., 1896) on the hereditary action and terato genic influence of microbic products. These observers vaccinated rabbits with the soluble products of bacilli (those of the microbe of blue pus were used) and thereafter allowed these animals to breed for several generations, placing them under the same external conditions as a series of unvaccinated animals which served as check-observations. In the descendants of the vaccinated animals two kinds of phenomena were met with—immunity to the pyocyanic disease in a certain number of cases, and the occurrence of malformations (hemiterata) in others, and of sterility, abortion, and mortinatality in still others. Such experiments show that morbid states may be impressed upon the germ before impregnation, that new pathological tendencies may be grafted in and be transmitted through several generations, and that these results may be brought about by the same means (soluble products of microbic action) as cause some forms of disease in later life and monstrosities in the embryonic epoch.

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* Fere (Ch.) *Compt. rend. Soc. de biol.* (Paris), 1893, 1894 and 1895.

† Bouchard's *Traite de Pathologie generale*, i, p. 164, 1895.

It is, therefore, fair to suppose that the causes of disease, monstrosities, and hereditary morbid states are similar, and that the differences in the nature of the results are due to differences in the organisms acted upon and not in the causes acting. Further, a consideration of these discoveries leads us to look in new directions for the etiological factors of hereditary morbid conditions, malformations and foetal disease in the human subject. We must now pay greater heed to the occurrence of syphilis, tuberculosis, and acute infective processes in the parents and even in the ascendants further back, and to the effect of alcohol and other chemical toxic agents upon the ovum both before and after impregnation if we would lay bare the secrets of antenatal pathology.

J. W. BALLANTYNE, M. D., Edinburgh.

Electrical Alarm for Infants.--According to a French journal an inventor has devised an electrical arrangement which consists of a microphone placed near the head of a baby in its cradle and connected to a sort of relay which operates an electric bell placed near to where the nurse is asleep; a cry from the child will therefore cause the bell to ring.—*Pop. Sc. News, 1896, xxx, 106.*

Interstitial Myocarditis Due to Syphilis.—HEKTOEN records (*J. Path. and Bact., 1896, iii, 472*) a case in a child six weeks old, and mentions that only eleven other cases have been recorded. In two of these eleven cases sudden death occurred when the children were considered to be in good health—a noteworthy fact, since it shows that this disease in the child may lead to the same abrupt arrest of heart action that frequently occurs in the adult when the heart is affected with syphilis.—*Brist. M.-Ch. J., 1896, xiv, 50.*

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PEDIATRICS.

Stated Meeting, March 12, 1896.

Two Cases of Cretinism.—DR. EMILY LEWI presented two cases of cretinism, seen at the Good Samaritan Dispensary, in the service of Dr. H. Koplik. The first one, Fanny L., twenty months old, had a negative family history. When two or three weeks old the child had been jaundiced, and at the age of three months had had an adenitis. During the preceding months it had been noticed that the child had grown stupid and indifferent, and was physically weaker. Then the child developed sores on the hands and feet, which refused to heal. The change in the facial expression had been sufficiently marked to be noticed by the friends. On April 10, 1895, the child had been brought to the dispensary for the first time. At that time there was a peculiar greenish-yellow color to the skin, with thickening of the upper and lower eyelids. The skin on the hands, arms, feet and thighs was finely wrinkled; the hair was sparse and very dry; there was flattening of the bridge of the nose; the lips were thick; the tongue was moderately thickened; there was slight puffiness of the cheeks. The child was unintelligent, took notice of nothing, could not be made to direct its attention to any object, and could not be aroused by a loud noise. The child could not hold its head erect for more than a few minutes at a time. The thyroid gland was absent. The chest was well formed. Examination of the heart and lungs was negative. The hæmoglobin was 20 per cent.; the relation of the red and white blood cells, normal as regards numbers. The body temperature was 96° F.; the extremities were very cold. On the index finger of the right hand and the thumb and fourth finger of the left hand were lesions which simulated syphilitic dactylitis. The parts were of a bluish-red color, with a pustular centre. Similar lesions were to be seen on the dorsum of the foot and lower third of the right forearm. The bowels were always constipated. The child was put on the glycerine extract of thyroid, in doses representing one-eighth of a grain, and this was increased one-eighth of a grain on alternate days. In two weeks the child showed improvement, not only in the anæmia, but in the puffiness of the eyelids and the greater regularity of the bowels. In one month the sores were healed, the color was markedly improved, the thickening of the lips had diminished, and the voice had become more natural. On June 16 the child cut her first tooth. About July 1st she was taken ill with acute intestinal catarrh, and, as she recovered very slowly from this intestinal disturbance, the thyroid extract was discontinued for three months. During this time there was a return of all the symptoms of myxœdema, the stupidity, the pallor and the puffiness, and the sore on the thumb reappeared. The thyroid treatment was begun again, and slowly increasing the dose. By December 1, 1895, the child was well, and had remained so ever since. It was now on a permanent daily dose of half a grain of the thyroid.

The second child, Fanny G., thirteen months old, was a very much more marked case of cretinism. The psychical condition was very much the same as in the first case, and the pallor of the skin was also noticeable in this child. There was marked thickening of the tongue and lips, and the mouth was constantly kept open. The thyroid gland could not be detected on palpation. The wrinkling of the skin of the extremities and of the back was very evident. The rectal temperature was 96° F. The hair was very dry and matted. The voice, and especially the cry, resembled a bark. The bowels were constipated. The hæmoglobin was 18 per cent., and the relation of the red and white blood cells was normal. The baby was put upon the thyroid extract, and improvement was noted in a week. The child gradually grew intelligent, the pallor disappeared, and there was a new growth of fine, silky hair. At the present time the rectal temperature was 98° F., and the child seemed good-natured and happy. It was now taking three-fourths of a grain of thyroid daily.

Dr. Henry Koplik said that he had noticed that as soon as these cretins were put upon the thyroid extract, the extreme anæmia began to improve rapidly.

Dr. G. M. Hammond said that these were the first cretins that he had seen at this age. He had observed altogether five cretins, three of them having been in one family. All of them had exhibited a greatly stunted growth and marked deficiency in intellect. For this treatment, with the thyroid extract to be effectual, it must be begun in early life. In a recent paper by Dr. Noyes, in which were reported the treatment of persons over thirteen years of age by the thyroid extract, there had been nothing like the same improvement noted as in the patients just presented.

"Retropharyngeal Abscess of Infancy and Childhood--A Revised Classification of Treatment Based Upon Etiology."—DR. HENRY KOPLIK read a paper with this title. He said that it represented his experience with 76 cases. As the retropharyngeal space was not as long in infants as in the adult, symptoms due to pressure on the larynx were observed at an earlier stage in infants and children. He divided retropharyngeal abscesses into (1) acute abscess, pointing wholly internally; (2) abscesses pointing wholly externally; (3) abscesses forming chiefly an external tumor, and (5) the burrowing septic abscesses, such as are seen in cases of scarlatina. The various forms of stomatitis, and affections of the tonsils and nasal passages must be looked upon as etiological factors. Animals injected with streptococci obtained from these retropharyngeal abscesses were found not to die of sepsis, showing that these streptococci were benign. That acute retropharyngeal abscess is especially a disease of infancy was well shown by the fact that out of the 76 cases only one was as old as nine years. It is most frequent during the period of suckling, and is quite uncommon after the second year. In infants suffering from this affection, the voice or cry would often be greatly changed; the child would refuse to nurse; its head would be thrown back, and there would be difficulty in breathing. Inspection of the fauces would often show a distinct prominence to one or the other side, but this might be due to the vertebrae rather than to an abscess. By digital examination alone could the diagnosis be made with certainty, but this examination should be made with gentleness, otherwise it may cause great prostration, or possibly even rupture of the abscess, and suffocation from the discharge of pus into the larynx. Dr. Koplik said that his experience had led him to believe that many writers had exaggerated the danger of leaving these patients to Nature. He did not favor this let-alone treatment, but certainly there did not appear to be such great risk from allowing the abscess to open spontaneously, for it usually did so by a minute opening, and hence there was no great danger of suffocation from the discharge of the abscess while the child was asleep. There is much difference of opinion regarding the best method of treatment, some favoring internal incision, and others the external incision. In the vast majority of his cases, namely, those opening in the middle line of the fauces, the internal incision gave immediate relief. With a bistoury, wrapped with adhesive plaster to within half an inch of the tip, an incision is made longitudinally from above downward. While this is being done, the assistant holds the infant, face downward, so that the pus may escape from the mouth. The discharge is facilitated by making pressure externally on the neck. The incision should be enlarged with forceps. In cases in which the deep cervical glands are involved, as indicated by the extensive external swelling, it would seem better practice to approach it from without, carefully dissecting from without inward.

DR. WILLY MEYER said that he would divide retropharyngeal abscesses into: (1) Acute idiopathic; (2) tuberculous; and (3) septic abscesses. As we could not be sure that Nature would prove competent to effect a cure, an operation was indicated, and, from our present surgical knowledge, it certainly did not seem to be good surgery to incise the abscess internally, for under these circumstances it was very difficult to keep the wound antiseptic and prevent aspiration of pus. He did not think, therefore, that the internal incision should be used for infants over one year old. It should be just as much within the power of every physician to make the external as the internal incision. The external incision should be made along the inner side of the sterno-mastoid muscle and the dissection continued down to the carotid artery. It is safe to make a small incision to the inner side of this artery. It had been advised to make the incision posterior to the sterno-mastoid muscle, but he had never employed it, as he had found it perfectly easy to reach the common carotid artery in the manner first described.

DR. C. C. COAKLEY said that he had long been of the opinion that the infection came from the tonsil in many of these cases. The lymph nodes of this region were quite small, and it did not seem to him probable that suppuration in them would cause the very large retropharyngeal abscesses. In children these retropharyngeal abscesses were prone to simulate peri-tonsillar abscesses. These retropharyngeal abscesses occur for the most part in infancy when the little one is usually in the recumbent position, hence it is easy for a tonsillar or peri-tonsillar abscess to be forced back into the retropharyngeal space. He thought that in the majority of cases these abscesses were best opened by the internal incision, and for this purpose he preferred to use the ordinary gum-lancet, passing it close to the guiding finger while the child is inverted.

DR. EMIL MAYER said that during fifteen years of work in a large throat clinic he had not seen more than five or six cases of retropharyngeal abscess; probably this was because most of these cases are brought to clinics for diseases of children. In his experience torticollis had been a prominent symptom, and it had also been a common experience to find that, although seen previously by other physicians, a correct diagnosis had not been made. He fully agreed with Dr. Willy Meyer in limiting the use of the external incision to children over a year.

Dr. J. Lewis Smith thought that a more accurately descriptive term for this condition was peri-pharyngeal abscess, and he would simplify the nomenclature by dividing all these cases into two classes, viz.: (1) those due to disease of the bone; and (2) those in which there is no bone disease. The first class should be treated by external incision; the second class by internal incision. Difficult breathing, resembling that of croup, was often an early symptom, but it could be differentiated from croup by noting that the obstruction was evidently higher up. The diagnosis was most easily made by digital exploration. He could not indorse an expectant plan of treatment, for he could recall two cases that had terminated fatally as a result of adopting this waiting policy.

Dr. W. L. Stowell said that it was important to examine the throat for retropharyngeal abscess in all cases in which torticollis was a symptom. He had never found it necessary to resort to the external incision.

Superstitions about Babies.—The Manx people believe that it will dwarf or wizen a baby if any one steps over it or walks around it.

In some parts of England people bind up the infant's right hand that it may have riches when grown.

In Yorkshire, England, a new-born babe is placed in a maiden's arms before being touched by any one else, in order to insure good luck.

In South America, a book, a piece of money, and a bottle of liquor are placed before the infant the day it is one year old, to ascertain its bent in life.

A baby is considered lucky in Scotland if it handles its spoon with its left hand, and it will be perfectly happy and successful if it has a number of falls before its first birthday.

In the north of England, when a child is taken from a house for the first time, it is given an egg, some salt, and a small loaf of bread, and occasionally a piece of money to insure it against coming to want.

In Germany it is considered necessary that a child should "go up" before it goes down in the world, so it is carried upstairs as soon as born. In case there is no upstairs, the nurse mounts a table or chair with the infant.—*Annals Hygiene, 1896, xi, 257.*

Book Review.

THE DISEASES OF CHILDREN'S TEETH, THEIR PREVENTION AND TREATMENT—A MANUAL FOR PRACTITIONERS AND STUDENTS.

By R. DENISON PEDLEY, F. R. C. S. and L. D. S.,

Dental Surgeon to the Evelina Hospital for Sick Children, London. London, Segg & Co., 289 and 291 Regent Street, W.; America, S. S. White, Chestnut Street, Philadelphia.

THIS is a subject which the medical practitioner is too apt to ignore, and we are reminded by the author in his preface that the dental department of the hospital is sadly neglected by the student of medicine. It is only when settling down in practice that "the practitioner finds much reason to regret the absence of a knowledge of diseases of the teeth, and the means by which they may be prevented."

The introductory chapter gives an epitome of the subjects dealt with, the author claiming consideration for "the connection between diseases in childhood and abnormal dental conditions," owing to the prevalence of disorders of the digestive tract during infancy and childhood. Situated as the teeth are, at the very entrance of the alimentary tract, and concerned, as they are, in the function of nutrition, it becomes a matter of vital importance that their preservation in a state of functional integrity should be the first care of those who are consulted upon or find themselves charged with the management of cases in which there is faulty assimilation."

The first chapter deals with the structure of teeth, the second with their eruption. Here the author discusses freely the evils arising during teething due to reflex irritation, and under certain conditions recommends the use of the gum lancet. A useful table is introduced showing the periods of eruption of temporary and permanent teeth.

Chapter III contains an account of caries and its causation. The reader is reminded that the teeth owe their density to the deposition of lime salts during development; that their destruction, although receiving the name of caries, is not a similar process to that which takes place in bone. Caries commences on the outer surface of the teeth, is due to the action of micro-organisms on food left between or about them. Fermentation follows with the production of acids which attack weak spots in the enamel, bacteria find their way into the softened tissue, and disintegration takes place with exposure of the pulp and its concomitant evils.

Inflammation of the pulp, of the periodontal membrane, alveolar abscess, necrosis and other sequelæ are carefully considered. Clinical cases are freely introduced showing the results of neglected mouths and emphasizing the facts that pyæmia and death may follow.

There is a long account of irregularities of the teeth in structure, form, number and position. In order to make the text quite clear, this chapter is profusely illustrated.

The chapter on the hygiene of the mouth should be interesting to both medical practitioners and dentists. In dealing solely with preventive treatment, he clearly shows what can be done by the medical practitioner to ameliorate "a large amount of unnecessary suffering, the result of dental diseases." The hygiene of the mouth in the home, the school and the hospital ward is considered, also the relationship which exists between dental and other diseases.

The author lays much stress on the necessity for cleansing the temporary teeth after *every* meal. Also that carious temporary teeth should be sought for and treated, as they "have to serve the purposes of mastication during the most important period of a child's existence," and that if neglected they often spoil their successors or interfere with their eruption. The prevalence of dental caries is emphasized by the results of an examination by the author of 3,800 children in the poor law schools, between 3 and 16 years of age. Only 828 had sound dentitions, the remaining 2,972 children having 10,695 carious teeth between them. The prevalence of caries of the teeth among the sick is shown by the results of an examination of 306 children in the wards of the Evelina Hospital.

Cases are given of chorea, diarrhea and sapræmia, showing how these may be kept up, and their rapid disappearance when carious teeth were treated.

The following statement will come as a surprise to most medical men: "There is strong reason to suspect, and even to believe that many of the diseases of the nervous system, diseases of the respiratory organs, diseases of the alimentary canal, may be due, in some cases directly, in others indirectly, to the fact that the masticatory organs have been neglected."

A long chapter follows on treatment. The various instruments required in the stopping and extraction of teeth are well illustrated, and the methods are described for operating when no efficient dental aid is to be obtained. A copious index is added, which should add to the value of the book. GEORGE CARPENTER, M. D.

NOTES ON TREATMENT.

INTESTINAL WORMS.

Anthelmintics are usually irritants, and in many of those diseases which simulate the verminous affection, but are distinct from it, there is already an irritated, if not an inflamed, state of the intestinal mucous membrane.

Vermifuges administered under such circumstances obviously do harm. It is thus that many lives are lost by the use of anthelmintic nostrums, which are extensively advertised and which command a ready sale, inasmuch as the belief in the presence of worms as a frequent cause of disease pervades all classes.

A safe rule, followed by many physicians—and it would be much better if it were general—is not to give anthelmintics unless the child has passed one or more worms, or their ova be found in the feces, and not then if the symptoms be referable to a coexisting disease. In doubtful cases, in which the symptoms resemble those of worms, a purgative dose of calomel or calomel and rhubarb may be employed. It will generally bring away one or more lumbrici or a mass of ascaris vermicularis, if either species of entozoa be present. This purgative may be safely employed if there be no previous diarrhea or debility. If, after one or two doses and a free purgation, no worms be passed, anthelmintic remedies should not be given.—J. Lewis Smith.

Round Worm (*Ascaris Lumbricoides*).—

℞	Ext. spigeliae fl.,	f ℥ x;
	Ext. sennae fl.,	f ℥ vi;
	Olei anisi,	♏ xx;
	Olei cari,	♏ xx.

Mix. Sig. Two or three times daily; half teaspoonful for a child of two years, and a teaspoonful for one from four to ten years old.—C. W. Townsend.

℞ Oil of chenopodium, ʒ ii.

Sig. To be given on sugar three times daily, in doses of five drops, to a child of three years, and ten drops to one of ten years.

A cathartic should be given every second or third day.—C. W. Townsend.

℞ Santonin, gr. ii;
Mild chloride of mercury, gr. ss.

Mix. Sig. Every night for two or three nights, to a child five or six years old, and followed each morning by a purgative dose of castor oil.—Eustace Smith.

℞ Extr. spigeliae et sennae, ℥ i;
Santonini, gr. viii.

Mix. Sig. Teaspoonful to a child of five years.—J. Lewis Smith.

℞ Olei chenopodii, gtt lx *vel* f ʒ i;
Pulv. acaciae, ʒ ii;
Syrupi simp., ℥ i;
Aquae cinnamomi, ℥ ii.

Mix. Sig. Give a dessert spoonful three times a day for three days, and repeat after several days.—J. F. Meigs.

℞ Spts. terebinth. rect., ʒ ii;
Olei limonis, gtt. v;
Mucil. gum. acac.,
Syrupi simplicis, āā ʒ vi;
Aquae anisi, ℥ ii–iii.

Mix. Dose: One teaspoonful every six hours.—J. Lewis Smith.

℞ Mucil. gum. acac., ℥ ii;
Sacch. alb., ʒ x;
Spts. aether. nitr., ʒ iii;
Spts. terebinth. rect., ʒ iii;
Magnes. calcinat., ℈ i;
Aquae menthae, ℥ i.

Mix. Dose: One teaspoonful.—Condie.

Tape-Worm (*Taenia*).—The taenicide should be given after fasting and followed in an hour by a cathartic to carry off the worm. The best taenicides are pomegranate or its alkaloid, pelletierine; felix mas; kousso; pumpkin-seed; turpentine, and cocoa-nut.

℞ Oleoresinae aspidii, ʒ i;
Tinct. quillaiae, f ʒ ss;
Tinct. aurantii dulcis, f ʒ i;
Syr. aurantii, q. s. ad f ℥ vii.

Mix. Sig. For a child five years old.—C. W. Townsend.

℞ Tannate of pelletierine, ʒ ss.

Sig. For a child three to five years old.—T. M. Rotch.

℞ Olei terebinthinae, ʒ i;
Olei ricini, ℥ ss.

Mix. Sig. Take in one dose.—FARQUHARSON.

Since entire expulsion of the tape-worm is effected with difficulty, preparatory treatment for about forty-eight hours should be employed before the vermifuge is administered. During this time the patient should take a mild purgative once or twice, and such food, in moderate quantity, should be allowed as leaves little residuum, as beef-tea, etc., with some stimulant if the patient feels exhausted. There are three articles of food which experience has shown to be especially useful in this preparatory treatment, perhaps from a sickening effect which they produce upon the worm—namely, salt herrings, onions and garlic. They may, therefore, be taken as food in the twelve or eighteen hours preceding the employment of the vermifuge, which it is ordinarily most convenient to administer in the morning.—J. LEWIS SMITH.

Pin-Worm, Thread-Worm, Seat-Worm.—(*Oxyuris Vermicularis.*)

℞ Magnesii sulphatis, ʒ iv;
Syrupi rubi idaei, f ℥ ii.

Mix. Sig. A tablespoonful two or three days in the week, to be preceded by santonin, spigelia, or chenopodium. Once a day a high enema of soapy water should be given; and the folds of the anus should be carefully scrubbed with soap and water, and the following ointment applied:

℞ Acidi borici, ʒ i;
Olei rosae, gtt. iii;
Vaseline, ℥ i.

Mix. Sig. Apply externally.—C. W. TOWNSEND.

Thread-worms are most effectually and easily removed by the use of enemata. For this purpose, lime water, or an infusion of quassia, or a solution of common salt (a teaspoonful to four ounces of water) may be employed. In using these agents the bowel should first be cleared out by a copious injection of warm water.—EUSTACE SMITH. Jacobi recommends a decoction of garlic as an enema in these cases.

℞ Santonin, gr. i;
Compound liquorice powder, ʒ ii.

Mix. Sig. Nightly for a child four years old.—EUSTACE SMITH.

Abstracts.

DEATH RATE AMONG NEW BORN CHILDREN IN CHINA.

For the past ten or fifteen years the great mortality among new born children in Hong Kong has been repeatedly brought to the notice of the Government by medical men, but the matter has always been dismissed without action, because of the difficulties of interfering with the Chinese customs. However, Dr. F. W. Clark, of the Sanitary Board, has just brought the subject again to attention by a memorandum showing the large death-rate among infants, especially from tetanus.

Dr. Clark finds that in the Asile de la Ste. Enfance, one of the several refuges for children, there occurred during 1895 deaths to the number of 817 out of 1,075 admissions. He is careful to state that by a personal inspection he has satisfied himself that this can be attributed to neither the sanitary condition nor the management of the institution, but that it is largely due to the barbarous treatment to which many infants are subjected soon after birth, treatment including extensive cauterization over the face and body, and the administration of drastic medicines by the ignorant midwives and native so-called "doctors." He points out that the death-rate in Hong Kong of children under five years of age is no less than 26 per cent. of those living at this age period as compared with 8 per cent. in London, and mentions as a significant fact that the female infant death-rate is practically double that of the male infant death-rate.

Any suggestion that the native midwives and "doctors" should be registered is confronted with the very serious difficulty that both of these classes are mostly composed of entirely untrained persons who live upon the ignorance and superstition of the masses. To register such would be to provide a remedy almost worse than the disease. The Sanitary Board have referred the matter to the Government, with an expression of opinion that early attention is demanded by it. It is to be hoped that some check may be devised capable of limiting the action of the ignorant impostors who have hitherto been allowed to practice without let or hindrance among the Chinese population of a colony, of which a recent history bears the title, "Europe in China."—*Atlantic M. Weekly, 1896, v, 205.*

A POSSIBLE EXPLANATION OF SUDDEN DEATH AFTER THE ADMINISTRATION OF DIPHTHERIA ANTITOXIN, APPLIED TO THE DEATH OF THE CHILD OF DR. LANGERHANS.

I published in the *Medical Record* of October 19, 1895, a note on the use of carbolic acid as a preservative of diphtheria antitoxin, in which, from my experience in the technique of the preparation of the antitoxin, together with a study of some animal experiments, Dr. Kortright's case and the literature of carbolic acid poisoning, I concluded that carbolic acid was too dangerous a substance to use.

The announcement of Dr. Langerhans, of Berlin, that "his son, aged 21 months, died suddenly while in perfect health, in consequence of an injection of diphtheria antitoxin," caused me to endeavor to ascertain whether the antitoxin used contained carbolic acid and by whom the antitoxin was prepared.

I sent a cablegram to Dr. Langerhans on Monday afternoon to ascertain these facts. To-day (Tuesday) I have received a reply in which he stated that the antitoxin employed contained carbolic acid and that it was prepared at the Hoechster Farbwerke.

The autopsy as reported in the New York *Sun* of yesterday gave a negative result. This was to be expected, as congestion of the brain, meninges, lungs, liver and spleen may be the only sign present when a small fatal dose of carbolic acid has been hypodermically injected.

"The minimal fatal dose of carbolic acid is not known" (H. C. Wood, *Treatise on Therapeutics*, p. 686, 6th ed.). This I have confirmed experimentally on animals and, moreover, have found the minimal fatal dose to vary.

The amount of carbolic acid employed as a preservative in a ten-cubic-centimetre dose of diphtheria antitoxin is ten cubic centimetres of a five-per-cent. solution. This is equivalent to 0.05 gram, or between three-fourths and four-fifths of a grain of carbolic acid.

The minimal dose for adults is usually considered as one grain, or 0.06 gram. Age modifies the dose. H. C. Wood (*l. c., p. 22*) recommends the rule of Dr. Young, which, allowing the above-given dose for an adult, would for a child of 2 years make the dose of carbolic acid one-seventh of a grain. Dr. R. O. Cowling (*American Practitioner, vol. i.*) and Professor Clark (*Boston Medical and Surgical Journal, 1872*) give rules which result in the same proportion.

These deductions, applied to the child of Dr. Langerhans, who was 21 months of age, would seem to indicate that he had received about five times the safe dose, and, inasmuch as the minimal fatal dose is unknown, perhaps a fatal dose.

I am aware that a great number of patients have been injected with diphtheria antitoxin and that no ill effects have been reported. Among these, however, are a large number who received antitoxin preserved with camphor and other harmless substances. I have met with no case among this latter class which I could include in this explanation. Moreover, it may be urged that if this explanation were true more cases would have been reported.

It is evident from the above explanation that, if the fatal dose be unknown and variable, in the great majority of cases with ill results, the relation of cause and effect is much obscured ; also that the effects of the diphtheria toxin must be excluded, and that it is only such rare cases as those of Dr. Kortright and Dr. Langerhans, which seem to have no ordinary explanation, that can demonstrate the explanation here given. I hope to be able shortly to complete an experimental investigation on the possible causes of sudden death after the administration of diphtheria antitoxin.—C. B. FITZPATRICK, *in Med. Rec., 1896, xlix, 572.*

SUPPURATION OF THE THYROID GLAND FOLLOWING DIPHTHERIA.

ROLAND S. LINDSAY (*Phila. Polyclinic, 1896, v, 146*) reports the case of a boy, 11 years old, suffering (December 26, 1895) from an attack of diphtheria. A culture proved the diagnosis correct.

Inspection showed a membranous deposit on both faucial tonsils, the soft palate and the mucous membrane covering the posterior portion of the hard palate.

The child objected to a laryngoscopic examination, and investigation in that direction was abandoned. Slight cough and dyspnea were present. The patient was given mercuric chlorid, iron and whisky. Löffler's solution was sprayed over the affected areas, and this was followed by the careful insufflation of trypsin.

In due course of time the patient recovered from the attack and was discharged. The submaxillary glands were indurated at the time of the discharge, but not more so than is usually seen after an ordinary attack of acute tonsilitis.

On January 14, 1896, the same patient had marked swelling of the submaxillary glands and induration of the post-cervical glands. One week later the left parotid was enlarged, and this was quickly followed by enlargement of the right parotid to the size of a half lemon. These enlarged glands rapidly yielded to the application of iodin around but not over the affected area.

The patient did not come again until March 6th, when the thyroid gland was found to be enlarged to a marked degree. Inquiry elicited the fact that a poultice had been applied.

March 7th. Thyroid rapidly breaking down and pus forming. Operation refused.

March 8th. Permission to open the abscess was granted and about two ounces of pus and disintegrated glandular structure were evacuated.

Digital examination after withdrawing the pus showed that the middle and portions of each of the lateral lobes had broken down. The patient is now doing well.

TREPHINING IN EMPYEMA.

REY (*Gazz. degli Osped., Med. Times, 1896, xxxi, 236*) recommends trephining through the rib in cases of pleural empyema. Intrapleural antisepsis can be well carried out by this method, and the integrity of the chest walls is better preserved, thus facilitating the re-establishment of respiration on the affected side. The author makes an incision four or five centimetres long over the eighth or ninth rib, about six centimetres from the costal angle, and then applies a trephine with a crown of one centimetre's diameter. After the disc of bone is removed the pleural cavity is washed out with sublimate solution and boracic lotion, and the largest possible size of drainage tube inserted, extending four or five centimetres into the pleural cavity. If necessary, other parts of the same rib may be trephined. The author has had considerable success with this revival of an ancient practice in the treatment of empyema.

REPORT OF CASE OF FOREIGN BODY IN RIGHT BRONCHUS; RECOVERY AFTER SIX DAYS' RETENTION

J. N. HALL reports (*Univers. M. Mag. 1896, viii, 527*) that on January 6, 1896, S. H., female, 11 years of age, placed in her mouth a setting from a scarf pin. By accident it suddenly slipped down her throat, and she immediately developed a severe attack of cough, lasting five or ten minutes. The stone has since been found to be a flattened one, one-quarter inch in greatest diameter, a quarter less than this in thickness. About it were the little metallic arms such as usually support a jewel, slightly increasing in diameter. The base had been broken off smoothly.

She had much wheezing and cough soon after the accident, but this subsided somewhat, although still present when seen twenty-four hours after the accident. A careful examination of the upper air-passages was, however, entirely negative.

The examination of the chest gave negative signs excepting in the lower right back. At a point just interior to the lower angle of the right scapula marked wheezing was found, resembling that of a severe attack of asthma, developing suddenly as one approached this point from above. Below the respiration was faint, and the wheezing was heard more distantly, but still with distinctness. The voice was transmitted normally on both sides. There was a little pain in the left side, vague and inconstant, and attributed to the strain of the severe cough of the previous day.

By Dr. Parkhill's advice, at St. Luke's Hospital, on the second day, the patient was inverted, and, while held in this position, caused to cough and sneeze vigorously by inhalation of snuff. The only result, as shown by subsequent exploration of the chest, was the admission of more air past the obstruction, its position having changed slightly, or, more probably, mucus having been removed from around it by coughing.

He advised no further interference at this time, and the patient was treated expectantly. No change could be noted in the signs until the 10th, although there had been, meanwhile, some cough, slight fever, and quite sharp pain in the chest, not very definitely localized, and relieved by morphia in moderate doses. At 5 p.m., on the date mentioned, the patient presented no abnormal signs in the chest, and was wholly free from pain, although suffering severely three hours before.

The mother was told that the foreign body had evidently become dislodged from its original position, was probably loose in the larger bronchial tubes, and, inasmuch as it might be dislodged by coughing, was advised to watch carefully for it in the event of cough. At 8.20 the next forenoon the stone was expelled with moderate cough, and the patient has been free from symptoms since that time.

The case is of interest because of the considerable time of the retention of the body, its location in the bronchus leading to the right lower lobe, and its spontaneous dislodgement.

CAUSES OF NASAL OBSTRUCTION IN CHILDREN.

Boulay (*Rev. Mens. des Mal del Enfance, March, 1896*) points out that the familiar adenoids do not account for all the nasal obstruction met in children. Hypertrophic catarrh of the nasal mucous membrane is itself an obstruction, and often accompanies adenoids and spurs of the septum, so that when the latter are removed the cure is still not complete. If the hypertrophy is only slight, it may disappear soon after the adenoids are removed, but if the inferior turbinate touches the septum the mucous membrane should be treated with the galvano cautery, or chromic acid, before the adenoids are interfered with. This hypertrophy is rarely found in children under two years. Foreign bodies in the nasal cavities are particularly frequent in children from two to six years of age. If the introduction of the body is not known by the parents, unilateral persistent nasal obstructions, with a purulent, more or less fetid, discharge, may be the only notable symptoms, and these may come on some months later.

Malformations of the septum coming on spontaneously are always due to a want of harmony between the development of the septum and that of the ethmoid and supra maxillary bones. This occurs, therefore, before the bones of the nasal cavities have taken their final shape, i. e., before the age of about twelve years.

In a series of autopsies of the newly born, Auton found spurs or other anomalies of the septum in 16 per cent., but at seven years, i. e., when, with the second dentition, the superior maxilla begins normally a more considerable growth, the anomalies begin most to cause symptoms. The heightened palatine arch in mouth-breathers causes a corresponding diminution in the height of the nasal fossae, and is thereby the source of the majority of septum lesions. Before ten years these lesions are chiefly in the antero-inferior portion of the septum. Later they appear more posteriorly. Malformation is rarely visible externally, though it may be often seen on examination of the nares without a speculum. Careful examination through a speculum, however, is necessary in order to recognize their exact extent and character. The author recommends the correction of the deformity by the knife rather than by electrolysis or by the cautery.

EPILEPSY OF DENTAL IRRITATION.

A case of epilepsy, traceable apparently to dental irritation, is recorded (in the *Western Dental Journal*, *J. Brit. Dental Assoc.*, *1896*, *xvii*, *184*) by DR. J. D. PATTERSON. The patient in question was a child aged 8 years, who for a year before being seen frequently suffered with spasms or convulsions, which would come on without warning. At one time these contractions would force the fingers of the hand into unnatural and rigid positions, at times only one finger doubling up, and again all of the fingers clasped tightly, the nails leaving their imprint upon the palm. Similar contractions would appear on the toes of the feet. The usual methods of treatment having failed to give permanent relief, the question of dental irritation was inquired into. There were no canine teeth, but the permanent teeth were in various stages of eruption and at the same time considerably retarded. Noting the points where irritation appeared from coming teeth and delayed shedding of deciduous teeth, the gums were lanced and the deciduous teeth removed where there was suspicion of irritation, with the result that the epileptic seizures ceased. This treatment was repeated whenever attacks supervened, the relief being always complete. Not until all the permanent teeth were completely erupted did the attacks entirely cease. The patient, at first a strong, healthy girl, became anæmic while the earlier treatment was of no avail, but rapidly improved when the relief from dental irritation was instituted. The epileptic spasms had not returned up to when the patient was last seen, namely, about three years ago.

WHAT IS THE VALUE OF OPERATIVE INTERFERENCE IN THE TREATMENT OF EPILEPSY?—BASED ON AN ANALYSIS OF SEVENTY CASES TAKEN FROM CONTEMPORANEOUS LITERATURE.

E. G. Mason says (*Med. News, 1896, March 21*) that in these matters the skill and judgment of the physician will, of course, be the most powerful factors, but there are certain broad principles which should always be borne in mind:

(1). Always consider an epileptic fit as a symptom of some underlying condition. (2) Inquire particularly and very carefully about the first convulsion: What was its apparent exciting cause; what was its character, general or affecting only certain portions of the body, and what portion of the body was affected at the beginning of the fit? (3) If there was an aura investigate it carefully, as it will not infrequently give a clue as to the seat of the lesion. (4) If there has been a trauma or a suspicion of trauma, shave the head and look carefully for a scar or a depression. If there is evidence of a trauma in a position corresponding to the initial symptoms of the fit an operation is usually justifiable. (5) If you cannot get a clear history of the case give a placebo and place the patient under competent surveillance until you can satisfy yourself as to the character of the fits. (6) Do not operate on a porencephalic child and expect to cure the epilepsy. Do not, as a rule, operate on a case of post-hemiplegic epilepsy in a child and expect to cure. (7) Do not operate on an old, idiotic epileptic, a victim of idiopathic epilepsy, with general convulsions of years' standing.

What, then, is the value of operative interference in the treatment of epilepsy? In the light of our present experience it will be fair to put it thus :

a. A certain small percentage of the cases will be cured.

b. A certain larger percentage will be improved.

c. An even larger percentage still will not be improved at all.

d. An operation upon almost any case will produce a temporary cessation of fits.

MYXOFIBROMA OF THE BLADDER IN A CHILD THREE YEARS OLD.

GEORGE K. SIMS (*Med. Rec.*, *1896*, *xlix*, *565*) reports this case: On December 28, 1895, Rosa S——, aged three years, female, colored, was sent into his department. She was very much emaciated and her appearance gave evidence of great suffering and severe illness. She had not passed her urine for three days, except a little that dribbled out. Her mother gave the following history: For the preceding eighteen months the child had had difficulty in evacuating the bladder and bowels, and had suffered a great deal with a straining, as she thought, to empty the bowels. These symptoms had gradually grown worse until three months previously a large tumor had developed in the lower part of the abdomen. She had a prolapse of the rectum, and there was a mass about the size of one's finger in the vulva. Three physicians who had treated her previously said that this was the womb which had come down, but they had failed to get it back into position after several attempts. Upon a hurried examination the diagnosis was made of a tumor obstructing the urethra and that the abdominal tumor was the bladder enormously distended with urine. After some difficulty he succeeded in introducing a small silver catheter and drew off about half a pint of very offensive ammoniacal urine. This removed the abdominal tumor and confirmed the diagnosis.

The vulva was so completely blocked up by the mass that it was very difficult to find its attachment, but a closer examination showed that it was attached about the vesical neck. Owing to the extremely debilitated condition of the child and the inflamed condition of the urethra and bladder, it was not considered advisable to undertake the operation of removing it at that time. She was given salol and boric acid to render the urine aseptic, and appropriate treatment to improve her general condition.

After about ten days of this treatment, and before the day set for the operation, the tumor slipped back into the bladder; several days later a large portion of it sloughed off and passed out, so that she could pass her urine without the use of a catheter, which she had not been able to do before. In the meantime her condition had improved so much that her mother would not consent to an operation. A portion of the tumor was left, and it was evidently growing very fast, for it was not long before it began to obstruct the urethra again, and when she bore down it could be seen trying to engage in the urethra.

On the morning of February 28, 1896, it had come out again, so he decided to operate at once. After a hurried preparation chloroform was given, the urethra was dilated, and by digital examination the tumor was found attached to the anterior wall of the bladder just above the urethral orifice. With a finger it was pulled out as far as possible and enucleated with curved scissors, this being the only means of getting at it, as owing to the large size of the pedicle and to its close attachment to the bladder walls, the snare or thermo-cautery could not be used. She rallied very well from the operation, and is getting along as favorably as could be expected. In addition to the medical treatment her bladder is being washed out twice daily with boric-acid solution.

The whole mass weighed about three ounces. Microscopical examination showed it to be a myxofibroma, a very rare neoplasm for this location, and its size was remarkable for a child of this age. Another peculiar feature is that it was attached to the anterior wall of the bladder, and not to the base, the usual situation.

CONGENITAL HYDRONEPHROSIS WITH OR WITHOUT DILATATION OF THE URETERS AND BLADDER, WITH TWO ILLUSTRATIVE CASES.

C. Mabel Blackwood (*Edinb. M. J., 1896, No. 490, 919*) says that hydronephrosis is a somewhat rare condition; its etiology and symptoms are alike obscure. Her attention was drawn to it by the following case:

The child, a male, was born in an asphyxiated condition, and energetic treatment had to be adopted before breathing could be established. He remained quite healthy for twelve days, though his extremities were always blue and cold, and the nurse thought his abdomen unusually large. After the twelfth day the abdomen seemed tender; the legs were drawn up; he vomited his food and cried continuously for two nights. He passed water without difficulty till a few hours before his death on the sixteenth day.

At the autopsy the upper lobes of both lungs were found to be expanded; the lower ones were atelectatic. The capsules of both kidneys were difficult to strip off. The kidneys were of normal size, the left being slightly the larger of the two. The substance was dense, the pelves not dilated. In size and appearance the left ureter resembled the large intestine. Joining the kidney at a normal angle, it presented a series of dilatations which were larger as it approached the bladder. Its walls were much thickened, and down one side were longitudinal fibrous bands. These bands were specially thickened at parts where it seemed to pull the walls longitudinally together and cause constriction and twisting of the axis. On opening the ureter, at parts corresponding to the constrictions was found the mucuous membrane in folds. These narrowed the lumen, and must have greatly obstructed the flow of urine. A narrow stylet was passed from the bladder into the ureter. The bladder was hypertrophied and enlarged. The right ureter presented the same conditions as the left, but to a minor degree.

Dr. J. W. Ballantyne kindly lent the second specimen. The child was born prematurely (8 months), and there was not more than one fluid ounce of liquor amnii. The child had had a rounded tumor, felt at the left side of the abdomen. It had double club-foot, and drop-wrist of right hand. The left kidney contained numerous small cysts: the pelvis was not dilated. The left ureter was sacculated, or, as Germans term it, "wurst formig," and enlarged to about the size of the large intestine. It was impossible to pass a probe along inside the ureter, owing to a series of mucous membrane folds which had free edges and formed pouches. There were at least nine of these. The bladder was distinctly enlarged. The right ureter was similar to left, but less dilated. It also had folds of mucous membrane. The urethra had an obstruction near meatus urinarius.

Maternal influence is scarcely proved. There are several theories as to its causation.

A. R. Simpson says, in his paper on Hydramnios, that fœtal kidneys are only in action if depuration of fœtal blood is interfered with. He thinks the fœtus is healthy till birth; and then in consequence of an enlarged caput gallinaginis there is obstruction to flow of urine, and that this causes hydronephrosis.

Virchow thinks that hydronephrosis prevents full respiration (? mechanically). The obstruction begins in pelvis of kidney from occlusion of papillæ.

Roberts, in his book on genito-urinary diseases, mentions oblique ureters and valves as most frequent causes.

Englisch thinks in newly-born child valves at kidney are normal.

Roberts says that inflammation is often the cause of thickenings and adhesions of the urinary tract.

Arnauld on hydronephrosis, Paris, 1891, gives the changes in development of the ureter as a cause. The urinary canal, at first posterior to the Wolffian canal, describes a sort of arc, and is successively behind, at the side of, and in front of the Wolffian canal. It is easily seen that a slight deviation would readily produce an abnormality.

Dr. J. Thomson thinks it may be due to defective coördination of the nervous mechanism leading to contraction of the bladder while its sphincter was closed.

An analysis of reported cases shows that in 18 cases there are 14 males and 4 females. Hydronephrosis is apparently commoner on the right side, for in 15 cases 7 were on the right, 4 on left, and 4 double. In 9 cases out of 28 were associated defects such as—*a*, imperforate anus; *b*, imperforate anus with spina bifida and club feet; *c*, club feet and no genital organs; *d*, *e* and *f*, club feet; *g*, left testical undescended; *h*, defect in septum ventriculorum; *i*, double ureters. The alleged cause in 17 cases was in—*a*, contraction of urethral orifice; *b*, constriction of ureter on entering the bladder, 4 cases; *c*, membrane of urethra, 3 cases: *d*, urethral obstruction, with valve where kidney joined ureter; *e*, obliteration in urethra; *f*, a double ureter, constriction where it joined before reaching bladder; *g*, constriction at pelvis of kidney; *h*, valve at ureter where it joined the kidney, and twist of ureter; *i*, narrowing of ureter where it joined the kidney; *j*, fibrous bands constricting longitudinally; *k*, mucous membrane forming valves; *l*, no external orifice and no urethra.

The cases of double hydronephrosis are apparently soonest fatal. Four cases of single hydronephrosis were alive at 3, 11, and 13 years respectively. Two of these were tapped, one was tapped and injected with iodine, the fourth had nephrectomy. If early infancy is survived this condition does not seem directly to cause death. There seems, occasionally, however, a want of lung expansion, and subsequent weakness of that organ. In 11 cases the causes of death were as follows—two died of atelectasis, two from atelectasis and pneumonia; tubercle was found in three cases; one died from operation, one from uræmia, and one from typhoid and debility.

The symptoms are obscure. Generally there is a localized swelling, and sometimes a sudden diminution of this, simultaneous with an increased flow of urine.

Some writers advise gentle massage, others repeated tapping. Arnauld thinks treatment should depend on etiology, and if this is not ascertainable the surgeon should make an exploratory incision, catheterize the ureter, and operate if necessary.

In a few cases it seems to cause so little inconvenience that interference is uncalled for.

Museum Exhibits.—It is unlawful, and a heavy penalty is affixed, for any person to exhibit in any public hall, museum, theater or any other building, tent, booth or public place for pecuniary consideration or reward, any insane, idiotic or deformed person, or any imbecile, in the State of Pennsylvania.—*Atlantic M. Weekly, 1896, v, 206.*

A Death Alleged to be Due to Diphtheria Antitoxin.—An infant son of Privat-Docent Langerhans, prosector of the City Hospital (Moabit), Berlin, died suddenly last week after receiving an injection of diphtheria antitoxin. The inoculation was made as a precautionary measure, a housemaid in the family being at the time ill with diphtheria. The father attributed his child's death to the serum, and caused the following notice to be published conspicuously in the Berlin papers for several days: "Our darling Ernest, aged twenty-one months, died suddenly in perfect health in consequence of an injection of Dr. Behring's diphtheria serum." Naturally, this has given rise to much discussion among the physicians and in the press. The authorities at once seized the body of the child and caused an autopsy to be made. The result was wholly negative, and nothing was found to prove or disprove the charge of Dr. Langerhans. Dr. Asch, writing in the *Vossische Zeitung*, gives instances of similar cases, one of them relating to the daughter of a high Prussian medical official, who was inoculated with Dr. Behring's serum and was in consequence ill for three months. On the other side, Professor Brieger expresses the opinion that it is a serious mistake to draw the deduction from an unexplained case that the serum is dangerous, and asserts that a normal injection of the serum will not cause death.—*Med. Rec., 1896, xlix, 558.*

PEDIATRICS

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Original Articles.

ON THE VALUE OF RECTAL EXPLORATION AS AN AID TO DIAGNOSIS IN DISEASES OF CHILDREN.

By GEORGE CARPENTER, M.D.,
Senior Physician to Out-Patients, Evelina Hospital for Sick Children, London.

THE great importance of a rectal exploration aided by bimanual palpation, in the elucidation of difficult cases of disease occurring in childhood, is not sufficiently recognized by the medical profession, and it is my hope that, after a perusal of this paper, with its varied experiences, I may have the satisfaction of bringing into greater prominence this method of clinically interrogating disease.

Constipation Due to a Tumor.—Some years ago, when Registrar at the Evelina Hospital, I was asked by a surgical colleague to administer an anaesthetic for him to a little girl, at Lewisham, who had suffered from constipation for a considerable period, which had been unrelieved by drugs. The family doctor, to whom great credit is due, was not satisfied with firing off all the drugs in and out of the pharmacopœia—and their name is legion—at the unfortunate patient and then leaving her to Nature, as I think would have been her fate in the hands of a less competent man, but proceeded to make a rectal examination. This determination to use the hands and brain that Nature had provided him with, rather than the concoctions of exploiting chemists, was rewarded by the discovery of a myeloid-sarcoma growing from the anterior surface of the sacrum. I rest content with briefly calling attention to the case, because it formed a strong impression on my mind, and was, no doubt, the inducement which led me to practice this mode of examination, almost as a matter of routine, and hence, indirectly, is answerable for this communication.

It will prove of greater interest if I relate briefly cases illustrating the value of this procedure, and will be preferable to a long account unrelieved by clinical pictures.

Umbilical Fistula Secondary to Prostatic Abscess.—A small boy, aged about three years, was brought to the out-patient department with an umbilical fistula. A casual inspection of the abdomen did not reveal anything of note, as there was neither swelling nor alteration in the appearance of the abdominal walls. A probe passed into the fistula, and then into a sinus for some little distance, and there perhaps the matter might have ended ; but careful palpation of the abdominal cavity revealed the fact that the mesenteric glands were about the size of a tangerine orange ; the tumor was nodular. At this time it appeared as if these glands were in some way connected with the umbilical fistula; at least this was a possible solution. There did not seem, as far as an examination through the abdominal wall was concerned, to be any evidence of peritonitis, or connection between these glands and the abdominal wall, nor did the use of the probe yield any great assistance in connecting these clinical features, which are not very infrequently found associated in tabes mesenterica ; but in this case it might have very plausibly been considered as due to difficulties in passing a probe along a tortuous sinus, and therefore not invalidating such a conclusion. An examination by the rectum shed quite a fresh light upon the case, and revealed an interesting condition, as well as at once solving the diagnosis and explaining the difficulty encountered in proving the supposed relationship between the umbilical fistula and the tuberculous abdominal glands.

Per rectum a lump about the size of a small pea was found in the position of the prostate, and extending from it there was a slight enlargement of the seminal vesicles on either side. The probe could now be passed down to the pea-like enlargement, and ended there. Evidently a tubercular abscess originating in this prostatic enlargement had burrowed along the urachus, and thus found its way to the surface by the umbilicus. The testicles were quite normal. Apart from the abnormality related, the pelvic contents were quite normal, and there was no evidence of peritonitis. Passing from the fistula to the mesenteric glands there seemed to be a cord about the diameter of a lead pencil, but oval in shape ; by bimanual palpation the tumor felt hard and glandular.

The child was fairly nourished, had a subnormal temperature, and did not suffer from diarrhœa. Without such a rectal examination it would have been quite impossible to have located the cause of the umbilical trouble, and it is more than possible that the tubercular enlargement of the mesenteric glands would have been considered a sufficiently satisfactory explanation.

Tubercular Peritonitis.—And this naturally leads me to the discussion of tubercular peritonitis, and to give an account of the help that may be expected in the diagnosis of somewhat doubtful cases by the use of digital rectal examinations, assisted by bimanual palpation. I think most medical men of experience will agree with me in the statement that they not infrequently are brought face to face with cases where it is most difficult to decide whether the patient is suffering from tubercular peritonitis, or whether the condition is due to chronic gastro-intestinal catarrh, associated with intestines full of flatus, from loss of intestinal muscular tone; the whole being accompanied by considerable abdominal distension and rigidity of the abdominal walls. How frequently such cases are brought by anxious mothers for "consumptive bowels," and they may really have this complaint in the medical sense, and how often the doctor would not like to stake his professional reputation on his ability to diagnose such a case; and he may well hesitate and feel at sea, when confronted by the struggling little mass of humanity, whose abdomen he is expected to pass a learned opinion upon. Without an anaesthetic it would, perhaps, be impossible to feel below those wind-distended abdominal walls, and without a rectal examination it would, not infrequently, be impossible to say that there was an absence of peritonitis; for it is not in every case unaided by a rectal examination, especially in the early stages, that lumpiness from matted intestines can be readily detected, even with the aid of an anaesthetic. It is in such cases as these that we may often receive invaluable assistance from a combined rectal and abdominal examination; and if we desire to arrive at the truth without further delay, or decline to wait Micawber-like for something to turn up, such an examination should be made there and then. In such a case as I have sketched I should not feel satisfied until I had made a rectal examination, and what I should expect to learn by such a procedure I will now detail.

Rectal examinations as an aid to abdominal diagnosis are naturally of greatest assistance in young children, say from birth to four or five years of age, because it is possible to explore in them a considerable area of the abdominal cavity outside the pelvis; and this is especially the case when they are placed under an anaesthetic, though the latter may not be absolutely necessary. With the patient's legs well drawn up so that the thighs are flexed on the abdomen and with the pelvis raised on a cushion, the left hand of the examiner on the abdomen and the right index finger in the rectum, the right side of the abdominal cavity, and by reversing the hands the left side up to the level of the umbilicus—the distance reached depending on the length of the index finger and the size of the patient—and sometimes a little above this level, can be manipulated with ease between the two hands and the condition of the intestines as well as the glands, apart from any abnormalities found within the pelvis, determined. If in such a case as I have supposed, and the type is not an uncommon one, the finger in the rectum and fingers of the other hand on the abdominal wall are separated by the thickness of the abdominal wall alone—the intervening layer of normal intestine can be considered a negligible quantity, for it cannot be gauged—then in such a case the question of peritonitis can be dismissed from the mind, however much external appearances were in favor of such a view. If, however, there is an appreciable quantity of material between the examining fingers, other than that of the abdominal wall, then, I say, the peritoneal coat of the intestine is thickened by lymph, and we have a totally different condition of affairs to engage the attention. By bimanual palpation not only can intestinal matting—usually, though wrongly, considered glandular implication—be detected with greater ease than through the abdominal wall alone; but a peritonitis, without definite abdominal lumps or a thin *plaque* of omental thickening, perhaps coarsely granular, should not escape the clinician. Of course, it is, perhaps, hardly necessary to remark that glandular implication will be readily detected at this time, and that the pelvic contents will receive attention, and that a partially filled bladder will not be considered as evidence of a peritonitic exudation; but I do not hesitate to call attention to this latter, because I have seen students whom I have taught my methods fall into this error, and therefore I suppose it is one that has to be guarded against. Conversely a localized collection of pus or other fluid may simulate a distended bladder, but the passage of a catheter will quickly settle the difficulty. Then, again, faecal lumps might suggest glandular implication or intestinal matting; here an enema, or the fact that these masses are readily indented or broken by the examining finger, will prevent a mistake being made. There is yet another point that deserves attention, and that is that intestines affected with peritonitis tend to move *en masse* when pressed upon, and do not quickly yield to the fingers when so treated, as in health. Occasionally small empty and contracting coils of intestine do yield a sensation to the examining finger in the rectum something akin to intestinal thickening from inflammatory causes, but when such have been felt once or twice such a mistake is not so likely to occur, especially if such a condition is remembered. To my feeling, they are something like the sensation experienced on manipulation of the empty colon through the abdominal wall—rather broadly cord-like I should express it—and they yield the sensation of contracted empty intestine, as I have more than once found to be the correct interpretation at the autopsy.

Horse-Shoe Kidney.—Not only then may a rectal examination give valuable positive information in a doubtful abdominal case, but it may throw a totally different light upon a case of abdominal disease, which was supposed to admit of but one interpretation to the merest tyro in medical matters. I here have a case in my mind which I was enabled to diagnose successfully, solely owing to the fact that I had made a rectal examination. In January, 1889, a child was brought to my out-patient department suffering from whooping cough, and examination of the lungs revealed the fact that this was complicated by broncho-pneumonia, but in addition there was an abdominal tumor, which, at the first blush, suggested tubercular peritonitis. The child's age was 2 years. Following my custom in abdominal cases, I made a rectal examination, and I was rewarded by being able to map out a horse-shoe kidney by bimanual manipulation, the anatomical relations of which I made careful notes at the time. I sent the child into the wards with this diagnosis attached, but my views were not received with the sympathy they merited, and the fact that I could so readily overlook so obvious a case of tubercular peritonitis was a subject of wonder, at least to the residents, for I had only just been promoted to the full staff, and was therefore, perhaps, more open to criticism. However, fortunately or unfortunately, as the case may be, the child died, and the absolute correctness of my notes was verified at the post mortem.

This diagnosis was no mere guess, but was founded on a scientific basis ; and it incontestably proves the value of the method I am now discussing. The diagnosis in this case, viz., that of tubercular peritonitis, practically made the prognosis fatal; for if that were correct the patient was suffering from acute tuberculosis and, as we all recognize, there is only one termination to that—the cemetery. On the other hand the recognition of a horse-shoe kidney did not

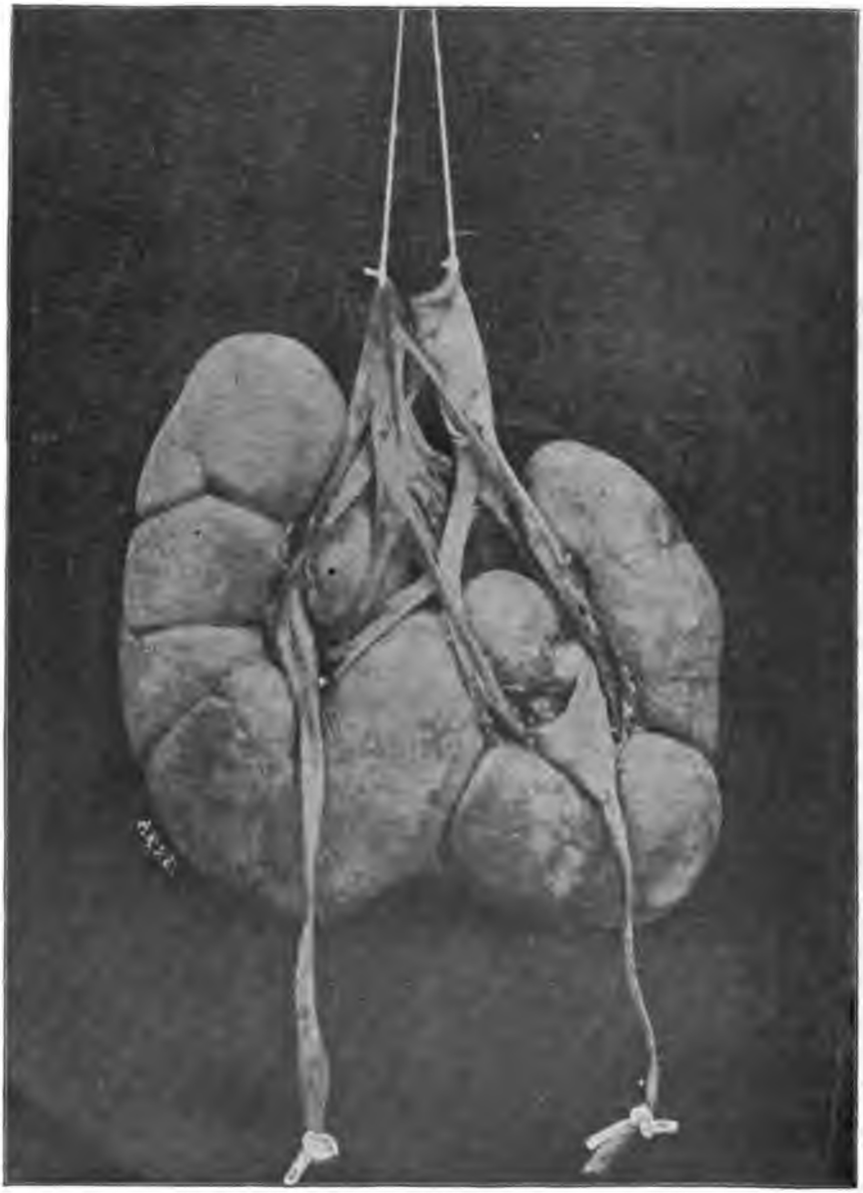

Fig. 1. Horse-Shoe Kidney (front).

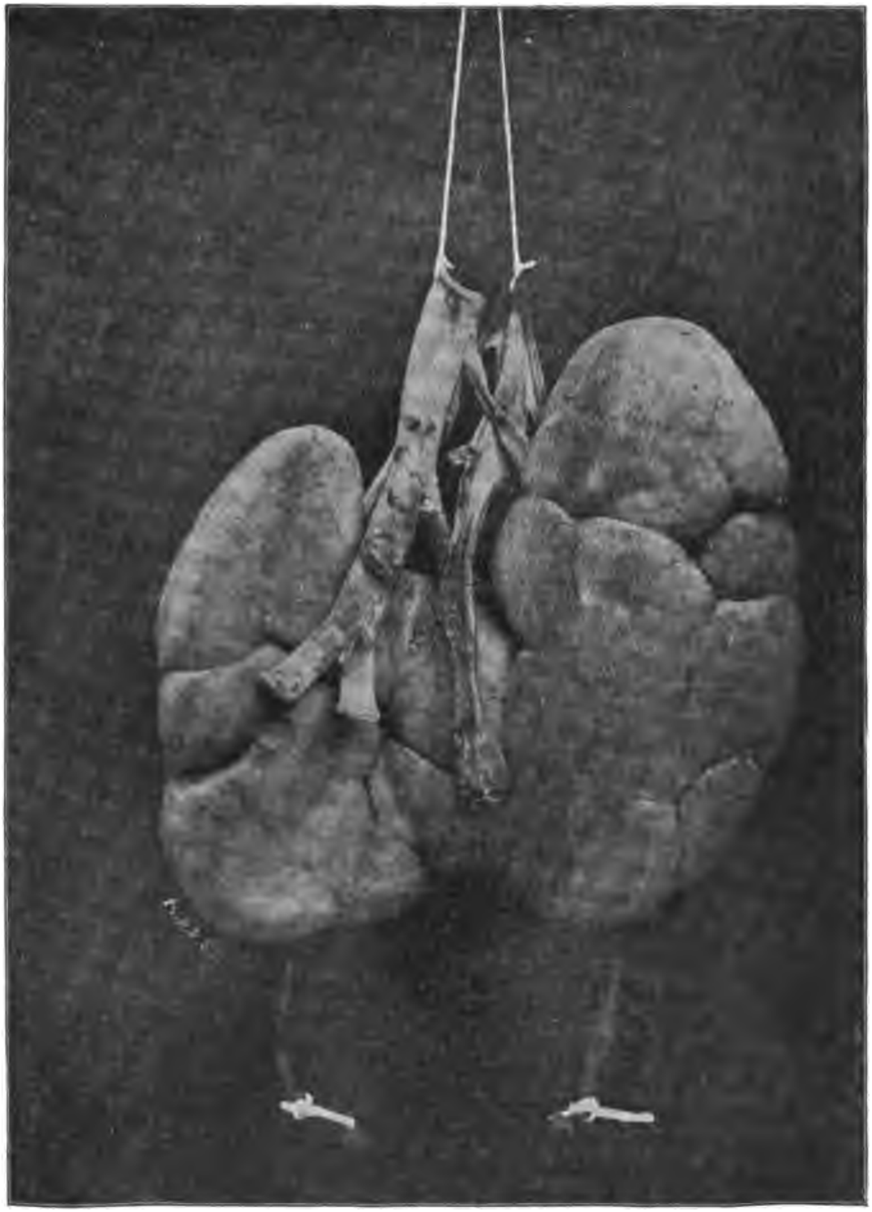

FIG. 2. Horse-Shoe Kidney (back).

imply tuberculosis of the lungs, and had the broncho-pneumonia from which the patient was suffering been less severe there was nothing to prevent recovery, or at any rate the holding out of such hope to its parents, which could hardly have been the case in the face of the first alternative. Had the child recovered it is perhaps interesting to speculate as to how long he would have suffered from Scott's ointment, and as to what effect this would have had on the tumor.

Before leaving the subject of tubercular peritonitis I propose to briefly relate a few illustrative cases, and I may add that it is advisable to remember that malignant disease, and in the young sarcoma more especially, may produce abdominal lumps which sometimes can readily be detected *per rectum* alone or by bimanual palpation, though their correct interpretation may not prove by any means an easy matter in the wards, and that intussusception may likewise prove a stumbling block.

A boy, aged nearly two years, was brought to the Evelina Hospital for swelling of the stomach, wasting, and constipation. The abdominal swelling had been noticed three weeks, and varied from time to time, but he had been ailing some time previously to this. The intestinal rumblings were very distressing ; he could not sleep, and passed scarcely any urine. The bowels were confined for three or four days, and then acted loosely. He was found to be a fairly-nourished, irritable, and rachitic child, with an enlarged abdomen, which measured 23½ inches at the umbilicus and 24½ inches at the widest part. It was distended, tympanitic, and the abdominal veins were large. *Per rectum* there was doubtful lumpiness in the right iliac region, and over the last lumbar vertebra two enlarged mesenteric glands were detected. A few days later there was no doubt about the lump in the right iliac region, the abdominal distension having decreased. In the hypogastric region a cord-like mass, of about the diameter of a cedar pencil, was detected over the site of the urachus. *Per rectum* a very distinct mass, slightly irregular in outline, was found, situated just above the last lumbar vertebra; and between the examining finger and the abdominal wall several inches of hard tumor were felt. A week later lumpiness was detected to the left of the umbilicus.

Latterly he had suffered from frequent abdominal pains, and the motions had been loose and dark green in color. The child died soon after, and a necropsy was made, which verified the diagnosis of tubercular peritonitis. The tumors were due to matted intestine.

A female, aged ten years, under the care of Dr. Nicholls, of Croydon, for some days was thought by him to be suffering from typhoid, so like were the symptoms to that disease. After watching the case for some days he considered that there was an element of doubt about it and summoned me for consultation. When we examined her we found her much emaciated, apathetic, and with an abdominal expression. The tongue most moist but furred, and aphthous patches were seen in the mouth. The temperature was 99° F. The heart's apex was displaced upward and inward just below and to the right of the nipple. The left side of the chest gave evidence of fluid in the pleural cavity, reaching as far as the angle of the scapula behind and the nipple in front, and which merged into abdominal dullness. In the right flank there was resonance, but in the left this was not nearly so marked; elsewhere dullness prevailed. A well marked fluid thrill could be transmitted from the abdominal to the pleural cavity and *vice versa*, but this was absent in the extreme flanks. Change of posture did not alter the physical signs. *Per rectum* no lumps were felt and the iliac fossae were free. Bimanual palpation however revealed a deeply placed fluctuating tumor between the finger in the rectum and those on the abdominal wall. The urine was drawn off; the localized collection of fluid still remained. Later, on operation, 30 ounces of pus were evacuated. There was a localized collection of pus in the left chest to the extent of 11 ounces. At her death, which occurred two or three weeks afterwards from general tuberculosis, no communication was found between the abdominal and pleural cavities. The abdominal abscess-cavity was completely shut off, a thick wall extending into the true pelvis, and upward and to the left as high as the umbilicus, in front of the intestines. The pus from the abdominal abscess was stained for tubercle bacilli, but none were discovered.

This case illustrates the condition of tubercular abdominal abscess, but it must not be forgotten that abdominal abscesses, other than tubercular, occasionally arise; sometimes starting from the vermiform appendix, rarely from an antecedent pneumonia, or of unknown parentage; but it is not necessary to pass all such causes in review.

A boy of five years was brought to my out-patient department at the Evelina Hospital on account of an enlarged stomach of 6 weeks' duration, and considerable looseness of the bowels. The abdomen measured 27¼ inches at the umbilicus, it was distended but resonant, the umbilicus protuberant but not reddened; and dilated blue veins coursed over it. He was emaciated; the extremities thin, the trunk with but little subcutaneous fat and the face thin and hollow-eyed, with a faint flush on the cheeks. He was examined *per rectum*, without an anaesthetic, but with negative results, owing possibly to the extreme distension. In three weeks' time the abdomen measured a trifle over 20 inches, the umbilicus was natural, and it was resonant with the exception of the hypogastric region. A rectal examination was made and the tip of the examining finger reached to within an inch or so of the umbilicus. In addition to the thickness of the abdominal wall quite an inch of tissue separated the fingers of either hand, to right and left of the hypogastric area. By abdominal palpation alone, and after this examination, the abdomen here felt a little lumpy perhaps. Nearly two months from the time of his first attendance the bladder was found full up to the umbilicus and when evacuated the abdominal condition was as follows: The abdomen below the umbilicus was dull to percussion and the abdominal contents had a tendency to move *en masse*. Fourteen months from the time of his first attendance he was quite well, as judged by absence of physical signs and his appearance.

A child of four years was brought to the Evelina Hospital on account of bronchitis and jaundice of six weeks' duration following an attack of measles. She was anaemic and did not complain of any pain. The abdomen was easily manipulable, but there was an irregular tumor in the right side occupying the inguinal region chiefly, but invading the neighboring hypogastric, umbilical, and lumbar regions to a small extent. The rectum was loaded with faeces, but when the bowel had been cleared by an enema it was possible to find a few glands at the upper extremity of the finger the size of lemon pips. An anaesthetic was then administered and a hard grape-like mass, opposite the umbilicus, was found stretching to the right iliac fossa and disappearing high up into the abdomen beyond the reach of the finger. Other portions of the abdomen were healthy. The uterus and its appendages were normal. She attended for a year nearly and was then lost sight of. Whilst under treatment she greatly improved.

This case illustrates a not at all common variety of abdominal tuberculosis, viz.: tubercular implication of the mesenteric glands without other complications.

An infant of 4 months who had craniotabes and snuffles, and whose mother gave a history of a series of miscarriages and the birth of snuffling children, was brought for a swollen abdomen. He had been fed on cow's milk. The abdomen was much enlarged, the abdominal veins were obvious, and it was painful to the touch.

Nothing of moment was felt through the abdominal walls, but *per rectum* there was decided thickening of the abdominal contents, though no obvious lumps. He died and at the autopsy the case appeared to be one of chronic peritonitis—the intestines could be stripped of their false membrane, leaving a shiny surface; the glands were not enlarged nor was there any intestinal ulceration. When this material came to be examined microscopically it was found to be tubercular and crowded with tubercle bacilli.

This case illustrates a very uncommon form of tubercular peritonitis.

Intussusception.—On the several occasions on which I have been able to feel the bowel *per rectum* in intussusception the invaginated portion has imparted the sensation of the *os uteri* advanced in pregnancy. Although this is, when felt, diagnostic of intussusception, it has never yet proved of value to me in differentiating between tubercular peritonitis and that disorder; nevertheless it must not be forgotten that tubercular peritonitis, when it attacks the omentum, which it not infrequently does, often forms a sausage-like tumor, passing transversely across the abdomen, above the level of the umbilicus ; and just such a tumor may be found in intussusception, when the small bowel invaginates the large.

Further, the sausage-like tumor of intussusception may prove as like as possible to that found in tubercular peritonit[illegible]nd in certain instances there may be an absence of peristaltic contraction in it; blood-stained mucus or blood in quantity may not appear; indeed. rarely this passage of blood may occur in tubercular peritonitis and the faeces may be passed formed. To complete the picture and make the similarity more striking, there may be an absence of symptoms of obstruction—a relaxed abdomen and a facial expression by no means indicative of so serious a lesion.

In such a case as this, if the bowel was sufficiently low to admit of digital inspection, the discovery of such a condition as I have related as occurring in intussusception would prove of invaluable assistance in forming a diagnosis.

The Female Pelvic Organs.—The next subject I propose to briefly deal with will be the female pelvic organs. The sacrum in children is almost straight, and so is the rectum, the direction of the bowel being probably influenced by that of the bone. The infantile bladder is egg-shaped, with the larger end downwards, and as the pelvis is shallow it is almost entirely an abdominal organ, but as soon as the child begins to walk the bladder sinks more into the pel-

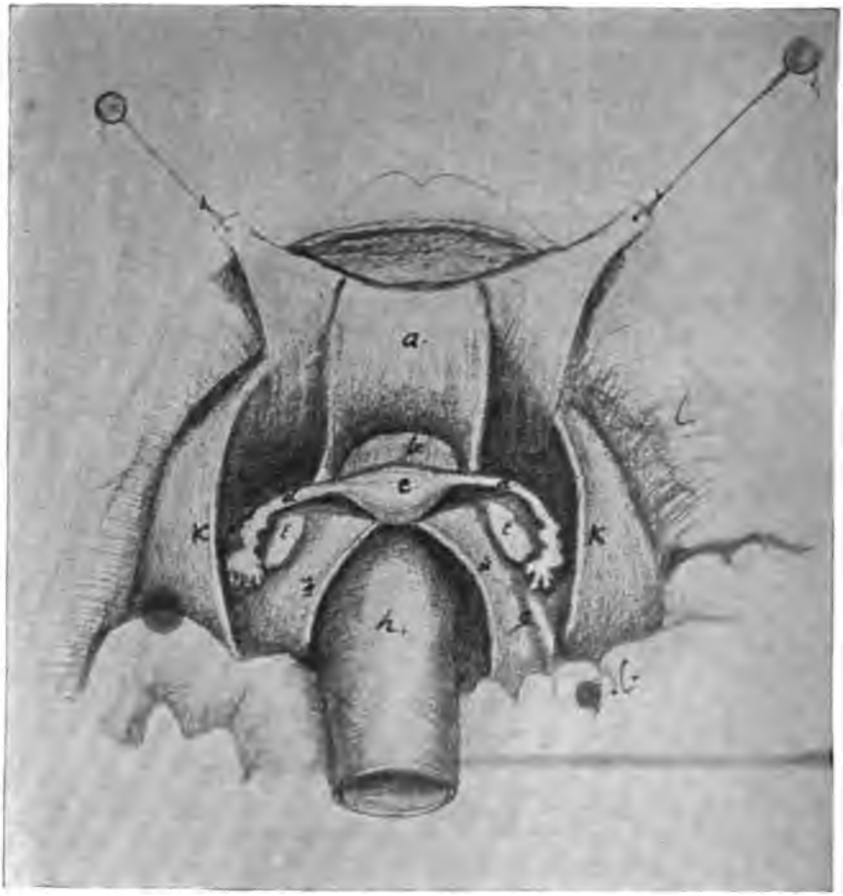

FIG. 3. Pelvic organs of a child, æt. 2 years and 4 months (natural size). *a*, Bladder pulled out of the pelvic cavity so as to show *b*, the vagina. *c*, Uterus. *d*, Fallopian tubes. *e*, Ovaries. *f*, The falciform ligament (utero-sacral ligament). *g*, Ureters. *h*, Rectum passing to Douglas' pouch. *k*, Pelvic brim. *l*, Reflected abdominal parietes. The round ligaments are not seen.

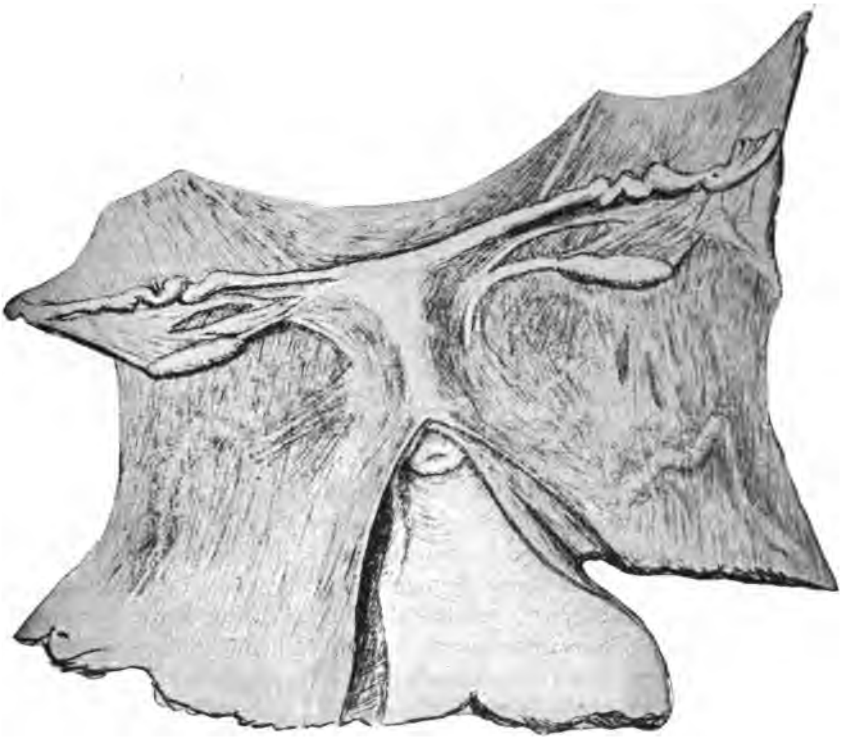

FIG. 4. Pelvic organs ot a child, æt. 2 years 4 months (natural size), removed from the body. The vagina has been laid open from behind and shows the os uteri. On either side of this is the edge of the falciform ligament with its uterine attachment; and to the right and left of the falciform ligament the ureters are seen as two curly tubes. The round ligaments are depicted in front of the Fallopian tubes and are ill-developed.

vis, though even then its attachments are so loose that it readily rises wholly into the abdominal cavity when distended or otherwise displaced, a feature observed until puberty is near at hand. The uterus in the child is almost entirely made up of cervix, there being very little body, and it lies in the upper part of the pelvis. At birth the ovaries have descended as far as the brim of the true pelvis, but in children a few weeks old they are found close to the external iliac arteries at the side of the pelvis.

I have found, however, the uterus and appendages well above the brim of the pelvis, on making a rectal examination in a child seven months old. Here is a sketch of the uterus, tubes and ovaries of a child aged 2 years and 4 months that I made *ad naturam*, which shows the relative positions.

Another sketch gives the exact size of these organs when removed from the body. It will be seen that the uterus is about an inch long and a half inch broad at the fundus, the tubes about 1¾ inches, the right ovary ⅝ of an inch in length, and the left ½ an inch in length, and each about 1-6 of an inch in diameter. The ovaries vary in size from 5-16 of an inch long by ¼ of an inch broad in a child a few weeks old, to organs measuring 1½ inches by ½ an inch in a child approaching puberty. Intermediate sizes are found according to the age of the child, but ovaries show some variation in size in children of similar ages. The organs are, for the most part, elongated oval in shape, but organs that are more or less round are occasionally found, and one ovary is not infrequently decidedly larger than its fellow. The Fallopian tubes, roughly estimating their diameter for clinical purposes, are about equal to the *Vas* at a similar age, at their narrowest part, but they gradually enlarge as they pass along to the fimbriated extremity—in length they vary from a little over one inch to a little over three inches, according to the age of the patient. The important anatomical guide to these structures when making a rectal examination is the falciform ligament. This falciform ligament, or the utero-sacral ligaments, if that term be preferred, forms a sickle-shaped curve surrounding the rectum, attached behind to the sacrum, and in front to the lower part of the cervix. This is very well seen in both drawings, and when the finger has passed some little distance up the rectum its sharp edge is readily found and is unmistakable. Using this structure as a guide the tubes and ovaries, which as the drawing shows are on a higher plane, can be readily manipulated between the exploring finger and the bony wall of the pelvis, and whilst these structures are being examined the ureters, the right being shown in the drawing as it crosses the pelvis and disappears under the corresponding tube and ovary, can be examined.

Cysts of the Ovary.—It is sometimes possible to detect in the ovaries the small cysts or dropsical graafian follicles, which are not infrequently found *post mortem.* The uterus, being a freely movable body, is not easily detected in this way, and readily eludes the finger which pushes that organ before it, but by a bimanual examination any marked abnormality could be easily appreciated if the bladder be emptied. In young children the uterus can be rolled between the finger and the symphysis pubis, and its contour made out with ease.

Displacements of the ovaries and tubes into the inguinal and crural openings sometimes occur. The youngest ovariotomy on record is by Chiene (*Edin. Med. Jnl., 1884, 1132*), of Edinburgh, in a child of three months. A swelling in the inguinal region suddenly occurred, and when various measures had been adopted for its relief the infant was operated upon. The contents of the sac were the ovary and fallopian tube. A rectal examination was not made, but if it had been, a fresh light might have been shed on the case.

Tuberculosis of the Uterus or Adnexa.—Tuberculous disease of the Fallopian tubes, the uterus or the ovaries is extremely rare in children ; and so rare is it that I think I could count on the fingers of one hand the number of cases I have seen diseased in this way both in the dead house and, what I have supposed to be tuberculous, in practice. The pathological specimens in museums are few and far between. In the Guy's Hospital Museum there are but two specimens—one " 2251$^{\underline{10}}$ (Dr. Bright, 1829) aet. 11 years, who died of 'strumous inflammation of the brain,' and lung tubercle ;" another still older specimen, 2251, of a child with tortuous tubes distended with cheesy matter. CHAFFEY (*Path. Socs. Trans., Vol. 36, 303, 1885*) published a case in a child of 4 years whose tubes were caseous, and the upper part of the uterus was caseous—she died of general tuberculosis. SILCOCK (*Path. Socs. Trans., Vol. 36, 303, 1885*) also recalls a case in a child of 5, who had tubercular salpingitis, endometritis and a tubercular deposit in the body of the uterus, the size of a walnut—she also died of general tuberculosis. Mr. ARTHUR CHEATLE (*Lancet 1891, 1098*), when registrar at Evelina Hospital, found in the post mortem room in a child of 21 months tubes filled with pus, the left being in communication with an abscess cavity holding one drachm. This case also died of general tuberculosis. Here is a drawing which I copied from Mr. Cheatle's sketch.

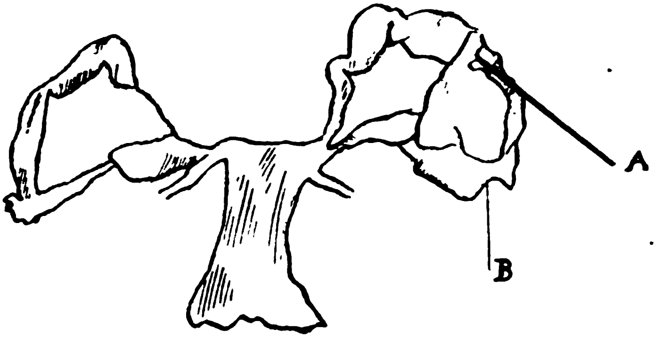

FIG. 5. Specimen dissected (child, æt. 1 9-12 years).
(A) Probe passed into Fallopian tube.
(B) Abscess wall laid open.
(Copied from Cheatle's drawing.)

About this time Dr. T. G. Stevens, then resident medical officer at the Evelina Hospital, also found another specimen in a child 9 years of age, who suffered from tubercular peritonitis and died of general tuberculosis. The tubes in this case had been invaded from their fimbriated extremities, and the tubercles were caseous at the outer end, but caseation ceased towards their uterine extremities. Microscopical sections showed a system of giant cells, epithelioid cells and lymphoid cells—a very few scattered tubercle bacilli were found. The accompanying drawing, executed by Dr. Stevens, depicts the condition. In a girl of 4 years, who succumbed to tubercular brain tumors, together with tubercular intestinal ulceration, I found both ovaries matted to their respective tubes, the extremities of which showed cavities containing caseating material. I diagnosed tuberculosis of the tubes during life.

In another girl aged 16 months there were tubercles in the uterus; elsewhere they were found in the meninges, the peritoneum, the liver, the spleen and the kidneys.

In a girl of 7 years who attended my out patients some six or seven years ago, and who looked exceedingly ill, I found an enlargement of the uterus, the right tube being the size of a lead pencil; there was a lump, possibly tubercular, the size of a pigeon's egg, just above the top of the sacrum. Unfortunately I soon lost sight of her, but had I possessed my present knowledge at that time I do not think I should have rested content with the mere record of the fact and the exhibition of tonics.

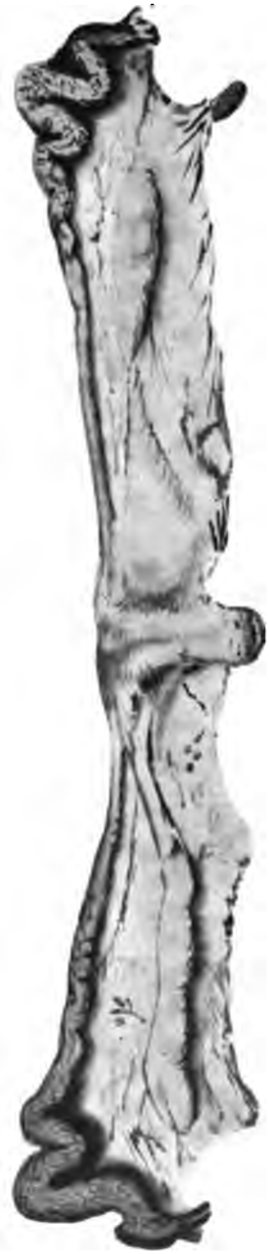

Fig. 6. Tuberculous Fallopian Tubes. Æt. 9 years

A girl of 7 years came to the Evelina Hospital suffering from tubercular peritonitis of the ascitic variety. I found the ovaries and uterus normal, but from the top of the latter a rounded tumor arose the thickness of the index finger, of about three inches in length, which, passing upwards in the abdominal cavity, was there lost. Two years after this the tumor had shrunk to the size of a lead pencil; she was in good health, and remains so to this day ; and this is 10 years since her illness commenced.

Inflammatory Diseases of the Tubes and Ovaries have hitherto received little, if any, attention, and the subject has been neglected. Dr. SANGER of Leipsic (*Keating's Cyclopædia of the Diseases of Children, vol. 3, p. 739*) records a case of a little girl who, contracting genorrhœa, developed all the symptoms of an acute pelvic peritonitis, from which she eventually recovered after a protracted illness.

Marx in the *Gazette de Gynecologie* of Nov. 15th, 1895, calls attention to the fact that salpingo-oophoritis sometimes complicates vulvo-vaginitis in infants with symptoms similar to those found in the adult. He supports this statement by referring to the post mortem examination of 15 children who had symptoms of this complication and in 5 of these the Fallopian tubes contained pus and their uterine attachments were sealed. He thinks that these infantile inflammations are apt to commence afresh at puberty and often are the real cause of pelvic inflammations of newly wedded women hitherto frequently credited to the husband.

I am uncertain whether to place the following case under this heading because there was no history of vulvitis ; the miscroscopical evidence was not in favor of tubercle. The child, whose age was 22 months, was the subject of congenital syphilis. It had not been healthy from birth and its abdomen had always been noticed rather swollen, though of late this latter was a more noticeable feature. Twelve months previously it had an attack of measles, and within the last 4 months it was attending as an out-patient for a period of 2 months, but there was no record of the cause of this attendance. In the right inguinal region a tumor was detected, the size of a French walnut, which did not feel fixed even through the abdominal wall. A rectal examination brought further light to bear upon the nature of the illness. The uterus was normal. Attached to its upper part, by a short cord-like attachment, was the tumor and on the posterior surface of this tumor was a convoluted tube, or what felt like one. The tumor was freely movable and could be carried over to the mid-line of the body though not beyond it ; fluctuation was detected in it by bimanual manipulation. The ovary on the opposite side was natural but on the affected side it could not be found. The child had Parrot's nodes, the free edge of the spleen extended 4 fingers-breadth in front of the costal margin, and the liver projected 3 fingers-breadth below the costal margin in the nipple line ; there were signs of bronchitis in the chest. The impression I first formed was that I had to deal with a case of pyosalpynx or possibly tubo-ovarian, probably tubercular ; and I thought it probable that the child had general tuberculosis. Careful watching for some days dismissed the idea of general tuberculosis from my mind ; and my colleague, Mr. Eve, operated on the child with a perfectly successful result. The patient on recovery was sent to a convalescent home. The tumor contained foul-smelling pus ; it was slightly adherent to the rectum, the coecum and the bladder. On carefully examining the portion removed Mr. Eve and myself came to the conclusion, after some consideration, that it was an ovarian cyst burrowing down betwen the layers of the broad ligament and probably somewhat tilted forward, so that the Fallopian tube which was enlarged and curly could be felt behind and above. The cyst measured 1¾ inches by 1⅝ inches. I have only given a short ac-

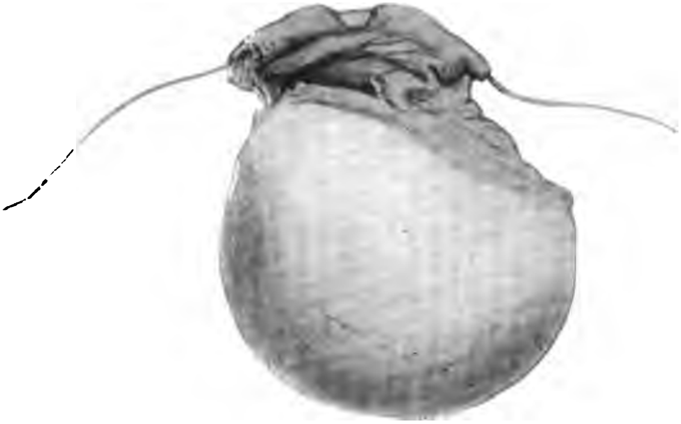

FIG. 7. Small ovarian cyst with thickened Fallopian tube attached. The fimbriated extremity of the tube is seen. A bristle has been passed along the tube—a section of which has been removed, as also its uterine attachment. Natural size from a child, æt. 22 months.

count of this case to illustrate my paper ; Mr. Eve will shortly publish it in full elsewhere.

I think this condition could hardly have been diagnosed without a rectal examination and a bimanual palpation ; and I think it probable that it might have been passed into some other group, failing to come to the hospital, as a case of suppurative peritonitis—a fate which it barely escaped.

A rectal examination and bimanual palpation in Marx's cases would have proved of great interest, and now that he has called attention to the dangerous complication of vulvo-vaginitis it certainly should be practiced if the occasion demands.

Ovariotomy.—Before leaving this section I will briefly mention ovariotomy in children. I have collected from literature 35 cases of those 12 years of age and under. In perusing these records what has struck me most has been the extreme infrequency with which an attempt at a rectal examination has been made, and further I have but little doubt that in some instances if this method had been put in practice the correct diagnosis would have been made at a very early stage. The youngest case on record of ovariotomy for an ovarian tumor is one of Roemer's, aged 1¾ years, the result being successful. Of these cases 15 were dermoids, 10 cystic, 6 sarcoma, 2 carcinoma, 1 malignant tumor, 1 cylinder-epithelioma, and 1 fibromyoma. In one case of cystic disease both ovaries were involved and both ovaries were attacked with sarcoma in another. Amongst these there were six deaths and in one case the disease recurred two years later with a fatal result. I once discovered the left ovary enlarged in a child of 3½ years, who had sarcomatous infiltration of both kidneys, together with abdominal deposits amongst other areas of attachment.

I have found a case of carcino-sarcoma of the uterus in a child of 2 years reported by Rosenstein, and a case of carcinoma of the uterus reported by Ganghofner in a child of 8 years. Of sarcoma of the vagina in children under 12 years I have found some 20 cases recorded. Vaginal sarcoma is usually seen as multiple polypi, sessile or pedunculated, of a firm consistence or even gelatinous. These polypi do not usually ulcerate nor are the lymphatic glands, inguinal or lumbar, affected as a rule, and the course of the disease is chronic ; the result fatal. The uterus or bladder may be invaded by the growth, and present polypoid excrescences, the recto-vaginal or vesico-vaginal septa, the connective tissue at either side of the vagina, or the broad ligaments may be attacked. The rectum is not so readily involved. Extirpation when no great extent of tissue has been invaded has proved successful. Ligature of the polypi and scraping of the vaginal mucous membrane appears to have been worse than useless, recurrence following these measures very quickly, and valuable time has been lost thereby.

Syphilis.—As yet I have not been successful in detecting during life syphilitic implication of the ovaries, although I have on many occasions sought for this condition in syphilitic infants.

On leaving these conditions it is, perhaps, natural to say a few words about the male organs of generation, and the seminal vesicles call for the most attention. In a communication to the *Practitioner* on " Affections of the Testicles in Hereditary Syphilis," in September, 1892, I there dealt with the difficulties in deciding between a syphilitic and a tuberculous testicle in the young subject. Often in the young the epididymis escapes when the testicle is tuberculous, and often one or both epididymes are attacked in that disorder, and the testicle escapes. Syphilis may attack the epididymis alone. Hydrocele may hide testicular infiltration in both syphilis and tuberculous disease. The two portions of the gland may be invaded simultaneously either by tubercle or syphilis. Here are two drawings taken from a case of syphilitic testicle in a child of six weeks; and it will be noticed that in both the body and the epididymis there is syphilitic new growth. Up to the present there is no evidence that the seminal vesicles suffer from congenital syphilis, though possibly before many years have passed there will be evidence at hand to prove the converse; for increasing knowledge daily shakes the foundation of our most cherished views. It is advisable, therefore, to make a rectal examination and note the condition of these bodies, for fresh light may be thrown on the case thereby. It is, perhaps, as well to remember that the seminal vesicles may be attacked by tubercle without the testicles being involved. The first case I call attention to in this communication is an illustration of this. Not only can the seminal vesicles be explored in this way, but the condition of the *vasa deferentia* examined as far as the internal abdominal ring.

This paper has already outstepped the limits I had originally intended. The mere mention of other well-known diseases will serve to show the additional amount of information to be gained by a rectal examination. Take pelvic abscesses, tuberculous ureters, impaction of renal calculi in the ureters, the condition of the ureters in hydro and pyo-nephrosis, hydatids, congenital mesenteric and other cysts, the bony pelvic walls in disease, the condition of the bladder and its contents in various disorders, rectal polypi and so

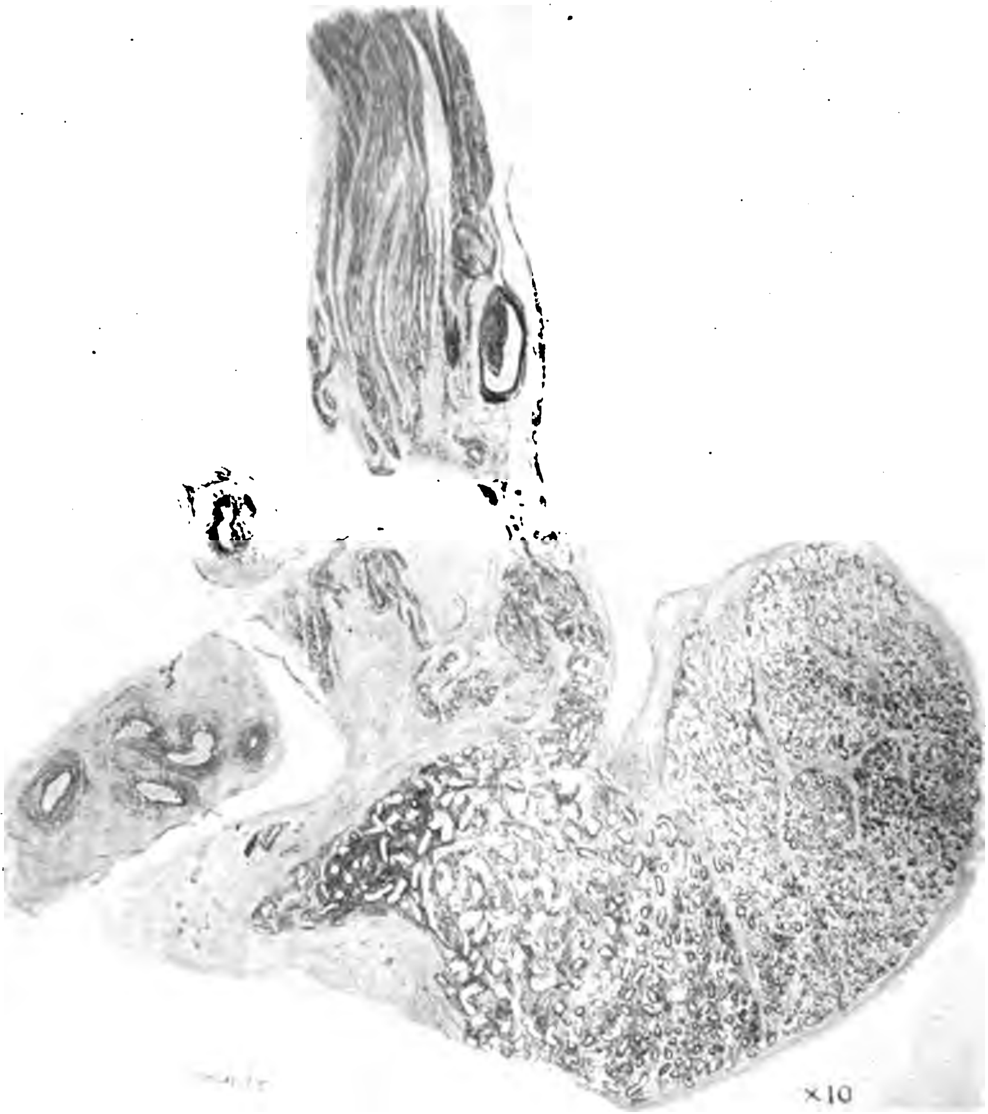

FIG. 8. Syphilitic (Congenital) Testis—æt. 6 weeks. Body and epididymis affected—a thickened tunica albuginea, fibrous septa and interstitial increase are seen. The seminal tubules are widely separated and irregular in outline.

on. It must not be forgotten that as a rare occurrence multiple rectal polypi may be associated with malignant disease. The pelvic contents should therefore be thoroughly explored so that any induration of the tissues may be detected at the time of examination. Should any exist all ideas as to the innocence of these growths should be at once dispelled and a timely discovery such as this may prove of service from a surgical point of view. The detection of infiltration would outweigh microscopic evidence pointing to the non-malignancy of the tumors in question.

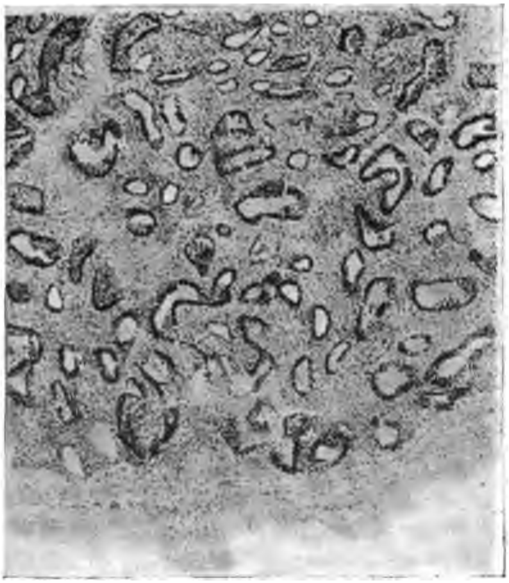

FIG. 9. Syphilitic (Congenital) Testis—æt. 6 weeks. Seminal tubules distorted in outline with a cellular lining two or three deep, or blocking the tube, or with a single lining of cells. Fibro-cellular new growth between the tubes. Thickened tunica albuginea.

I have been able to detect an impacted calculus in a tubercular ureter. In a boy just over 5 years suffering from coarctation of the aorta I found the arteries in the pelvis tortuous, thickened and apparently greatly increased in number.

Before concluding I will relate a recent experience which is of some interest. A boy of seven years, who had been ill with an indefinite febrile complaint, was sent to me by Dr. Lacy of Sunninghill, Ascot, in the middle of February in the present year. Apart from a tumid abdomen, constipation and an obvious state of ill health nothing definite was detected; but I suspected that he had been suffering from typhoid fever, as there had been recently a case of this disease in the house. A few days after this I saw the case in consultation with Dr. Lacy at Sunninghill and we then took the opportunity of thoroughly overhauling the drainage of the Mansion, which had been considered a model of up-to-date sanitation, and in fact had been recently passed with flying colors by the sanitary authority. Our researches were rewarded by the discovery of the escape of sewer air all through the dwelling, but it was in greater profusion around the patient's bed than elsewhere. The next day the family removed to a neighboring estate and the child was placed under the best possible sanitary and hygienic surroundings for hastening his convalescence, and with considerable benefit to his health, and so great was the improvement that Dr. Lacy sanctioned his parents making arrangements for drafting him to their Brighton residence. This was about 9 weeks from the time I first saw him. His temperature then suddenly ran up to 104° F., remained high and he began to lose ground. Soon afterwards I again saw the child with Dr. Lacy—he was rather drowsy, his cheeks were flushed, and he presented a marked tâche cérébrale. We had on a previous occasion discussed the possibility of tuberculosis, but the parents were healthy, there had been no tubercle in the family of either parent, and the surroundings of the patient, apart from the drainage question, had not been favorable to the development of tubercle. A most careful physical examination was made and, with the exception of a trifling amount of blurring of the optic discs on the temporal side, the evidence which was obtained on which to found a diagnosis was nil. He had no pelvic symptoms whatever, and his constipation had been treated by enemata and without causing distress, so that an inquiry in that direction did not promise much assistance. A rectal exploration was made and we found an abscess at the back of the rectum which held about an ounce of foul-smelling pus. The cavity was localized and involved the front of the coccyx and neighboring part of the sacrum, but these bones had not been denuded of their periosteum.

In conclusion, I can promise to those who will practice rectal examinations much valuable information which could not otherwise be obtained in certain abdominal diseases, and as time progresses I hope that much additional knowledge in the future, other than *post mortem*, may be added to the diseases of the female pelvic viscera in children by other workers in this direction.

BIBLIOGRAPHY—SARCOMA OF THE VAGINA.

AUTHOR.	AGE OF PATIENT.	REFERENCE.	SITE OF GROWTH.
1. Ahlfeld.	3½ yrs.	Archiv. f. Heilkunde, Bd. 16, s. 135, 1867.	Vaginal polypi fibro-sarcoma filling pelvis inguinal glands enlarged.
2. Billroth.	18 mos.	Wiener Klin. Woch., 1889, No. 8, s. 159.	Warty growths vagina and bladder; vesico-vaginal septum infiltrated. Fibro-sarcoma.
3. Demme.	5½ yrs.	Pick (quotes in) Archiv. f. Gynak., vol. 46, s. 218.	Vaginal polypi. Fibro-sarcoma.
4. Hauser.	6 mos.	Virchow's Archiv. Bd. 88, s. 168.	Vaginal tumours (multiple); round and spindle cells and striped muscle fibres.
5. Heckford.	2 mos.	Trans. Obstet. Soc., vol. 10, p. 224, 1868.	Vaginal and vulval villous tumour. "Medullary."
6. Korner.	2 yrs.	Pick (quotes in) Archiv. f. Gynak., Bd. 46, s. 220, 1894.	Vaginal polypi; vesico-vaginal septum infiltrated. Fibro-sarcoma.
7. Marsh.	2 yrs.	Trans. Path. Soc., vol. 25, p. 178, 1874.	Polypi vagina and bladder; vesico-vaginal septum infiltrated. Small round celled sarcoma.
8. Marshall.	2 7-12 yrs.	Brit. Med. Journal, vol. 1, p. 127, 1889.	Vagina.
9. Pick.	2 yrs.	Archiv. f. Gynak., Bd. 46, p. 192, 1894.	Vagina infiltrating pelvic organs. Spindle-celled sarcoma.
10. Power.	2 4-12 yrs.	St. Bart's Hosp. Reports, vol. 31, p. 121-135. Path. Socs. Trans., vol. 47.	Vaginal polypi connective tissue right side of vagina. Fibro-sarcoma and myxo-sarcoma.
11. Sanger.	2 8-12 yrs.	Archiv f. Gynak., Bd. 16, s. 58.	Polypoid masses in vagina-bladder, broad ligaments, deep lumbar glands infiltrated. Round-celled sarcoma.
12. Schuchardt.	7 mos.	Verhandl. der Deutsch. Gesellsch. f. Gynakol., Bd. 2, s. 239, 1888.	Vaginal tumour. Mixed-celled sarcoma.
13. Ditto.	2½ yrs.	Ibid.	Vaginal polypi. Mixed-celled sarcoma.
14. Schustler.	4 yrs.	Wiener Klin. Woch., ss. 148, 225, 1888.	Vaginal polypi. Vesico-vaginal septum. Myxo-sarcoma.
15. Soltmann.	2½ yrs.	Jahrb. f. Kinderheil, Bd. 16, s. 418.	Vaginal and bladder polypi round-celled in vagina; spindle-celled in bladder.
16. Smith (T. C.)	3 8-12 yrs.	Am. Jour. of Obstetrics, vol. 16, pp. 555 and 668, 1883. Ibid, vol. 27, p. 577, 1893.	Vaginal and uterine polypi. Uterine subperitoneal growths. Myxo-sarcoma.
17. Steinthal.	2 yrs.	Virchow's Archiv., Bd. 111, s. 449.	Vaginal tumour. Myxo-sarcoma.
18. Thomas.	18 mos.	Am. Jour. of Obstetrics, vol. 7, p. 51.	Tumour of left labium majus. Sarcoma.
19. Weinlechner.	18 mos.	Wiener Klin. Woch., s. 109, 1889.	Vaginal polypi, involving bladder (cystitis), cervix (pyo-metra) and urethra. Myo-fibro-sarcoma.
20. Ditto.	1 year.	Ibid., s. 130.	Vaginal polypi.

MALIGNANT DISEASES OF THE UTERUS.

AUTHOR.	REFERENCE.	AGE OF PATIENT.	SITE OF GROWTH.
S. Rosenstein.	Virchow's Archiv. B., s. 191, 1883.	2 yrs.	"Carcino-Sarcoma" of uterus, size of walnut; suppression of urine. Death in 14 days.
Ganghofner.	Zeitschrift fur Heilkunde, 9, 1888, s. 337.	8 yrs.	Carcinoma of uterus. Tumour size of crown piece; uterus 2.6 cm. long. Death from variola

CASES OF OVARIOTOMY.

AUTHOR.	REFERENCE.	AGE OF PATIENT	VARIETY.	RESULT.
1. Alcock.	Lancet, 1871, p. 850.	3 yrs.	Cystic.	Death.
2. Barker, quoted by Cupples.	Date of operation, 1871.	6¾ yrs.	Cystic.	Cure.
3. Barlow and Marsh.	Clin. Socs. Trans., vol. 2, 1878, p. 175.	12 yrs.	Dermoid.	Cure.
4. Bianchi.	Bull. Soc. Mediche, 1891, p. 41.	8 yrs.	Fibro-myoma.	Cure.
5. Bigelow.	Am. Jour. Obst., 1882.	4 yrs.	Carcinoma.	Death.
6. Black.	Lancet, 1892, vol. 2, p. 611.	7½ yrs.	Dermoid.	Cure.
7. Chenoweth.	Am. Jour. Obst., 1882, p. 625.	7¾ yrs	Cystic.	Cure.
8. Continental name not given	Med. Press and Circ., 1873, p. 280.	6¾ yrs.	Dermoid.	Cure.
9. Croom.	Edin. Med. Jour., 1888-9, p. 1013, obs. 80.	11 yrs.	Sarcoma, both sides.	Cure.
10. Croom.	Edin. Med. Jour., 1893, p. 689.	7 yrs.	Sarcoma. Round cell.	Cure.
11. Cupples.	Richmond & Louvle. Med. Jour., Dec., 1874.	7½ yrs.	Cystic.	Cure.
12. Duchamp.	Arch. de Tocologie, vol. 11, 1884, p. 23.	8½ yrs.	Cystic, uniloc.	Cure.
13. Griffiths.	Lancet, 1876, p. 750, vol. 2.	12 yrs.	Dermoid.	Cure.
14. Hamaker.	New York Med. Jour., 1889, vol. 2.	7 yrs.	Cystic.	Cure.
15 Heinricius.	Arch. Obs. et Gynec., 1889, p. 29.	12 yrs.	Cystic colloid.	Cure.
16. Hooks.	Am. Jour. Obstet., 1886, p. 1022, vol. 19.	2½ yrs.	Dermoid.	Death.
17. Kollock.	New York Med. Jour., 1891, p. 722.	11¾ yrs.	Cystic, both sides.	Cure.
18. Krukenberg.	Berl. Kl. Woch., 1888, p. 855, vol. 25.	8 yrs.	Carcinoma.	Recovery.
19. Lebedjeff.	Vratch, 1889, p. 196.	9 yrs.	Dermoid.	
20. Lucas.	Clin. Socs. Trans., vol. 21, p. 224.	7 yrs.	Sarcoma, round cell.	Cure.
21. Mackenzie.	Dublin Jour., 1888, p. 302.	8½ yrs.	Dermoid.	Cure.
22. McGraw.	New Orleans Med. Journal, Sept., 1877.	11 yrs.	Cystic.	Cure.

AUTHOR.	REFERENCE.	AGE OF PATIENT	VARIETY.	RESULT.
23. Malins.	Lancet, 1890, p. 1174, vol. 1.	9 yrs.	Sarcoma, cystic.	Death.
24. Mears.	Philadelphia Med. Times, 1870-72, vol. 1, p. 45.	6 2-3 yrs.	Dermoid.	Cure.
25. Neville.	Brit. Med. Jour., 1880, p. 246.	2 11-12 yrs	Dermoid.	Death.
26. Omori & Ikeda.	Cent. f. Gynaek., vol. 16, 1892, s. 1009.	10 yrs.	Dermoid.	Cure.
27. Parks.	Amer. Jour. of Obst., 1888, p. 761.	7 yrs.	Malignant tumor.	Recov. Recrd. 2 yrs ltr., death
28. Peaslee.	"OVARIAN TUMORS," p. 59.	9 yrs.	Dermoid.	Unrecorded.
29. Polotebnoff.	Cent. f. Gynaek, 1887, s. 373.	9 yrs.	Dermoid.	Cure.
30. Roemer.	Deut.Med.Woch., 1883, p.762.	1¾ yrs.	Dermoid.	Cure.
31. Schwartz.	Arch. f. Gynaek., 1878, s. 475.	4 yrs.	Cystic colloid.	
32. Thornton.	Brit. Med. Jour., 1881, p. 938.	7 yrs.	Dermoid.	Cure.
33. Wagner.	Arch. f. Kl. Chir., 1884, s. 504.	10 yrs.	Sarcoma, round cell.	Recovery.
34. Wegscheider.	Beitrage zur Geburtshulfe und Gynakologie Band 1, 1872, s. 35.	12 yrs.	Epithelioma cylinder.	Death.
35. Wells.	Brit. Med. Jour., 1874, p. 342.	8 yrs.	Dermoid.	Cure.

The Ohio State Pediatric Society held its annual meeting, the second in its history, at Columbus on the 27th of May. The address by the president, Dr. S. W. Kelley, of Cleveland, was on "Pediatrics, Past, Present, Prospective." We append a portion of the programme: Club Feet in Infancy, by Dr. B. Merrill Ricketts, Cincinnati; The Treatment of Pneumonia in Children, by Dr. D. S. Hanson, Cleveland; The Preservation of the Teeth in Childhood, by Dr. M. F. Miller, Wadsworth; The Causes, Symptoms and Treatment of Catarrh of the Stomach and Duodenum in Children, by Dr. J. Perrier, Cleveland, O.; Tuberculosis in Infancy, by Dr. H. H. Spiers, Ravenna, O.; The Milk Laboratory and Its Effects, by Dr. Hendrixson, Columbus; Summer Diet for Babies, by Dr. J. M. Dunham, Columbus. A full report of the proceedings will appear in an early issue of PEDIATRICS. The officers of the Society are as follows: President, Dr. S. W. Kelley, Cleveland; Vice-President, Dr. J. P. West, Bellaire; Secretary and Treasurer, Dr. G. M. Clouse, Columbus; Chairman of Council, Dr. J. M. Dunham, Columbus.

INTUSSUSCEPTION IN A CHILD SIX MONTHS OLD—DEATH ON THIRD DAY.

By H. Morell, C.M., M.D.,
Slayton, Minn.

ON November 16th, 1895, I was called to see a female child, six months old, who was taken suddenly ill four hours before with severe pain in the bowels and the passage of pure unmixed blood by stool. When the patient was first seen by me she was crying in great pain, and was vomiting, the pulse and respirations quickened, the temperature normal, and the abdomen tympanitic. I examined the napkins, and found that they were thoroughly saturated with blood. She had no motion of the bowels since the day before. The case was recognized as a grave one and a bad prognosis given. One-sixteenth grain of morphine was administered to produce rest. Next day the child was apparently better, no vomiting, and no movement nor blood from the bowel. On the next day, however, the child was worse; face pale and anxious, two passages of blood from the bowel and vomiting of greenish yellow fluid. Child died at 3 a. m. No post mortem was made.

The above case is rather interesting, inasmuch as it is rare, and one does not meet with similar ones in literature, for the reason, perhaps, that little in the way of treatment can be done for so young a child. Probably it would have been more interesting if a post mortem could have been obtained and the diagnosis verified, although the passage of pure blood is pathognomonic of a complete stenosis of the bowel; this, taken together with the sudden onset, stercoraceous vomiting and other grave symptoms, points conclusively to obstruction of the bowel. The cause of the occlusion is difficult to explain. The child always had been healthy, and had no diarrhea, which sometimes produces invagination. I can only suggest that it may have been due to some strain, causing part of the bowel to become invaginated. In regard to treatment of these cases various measures have been advocated. Vogel recommends opium and rest and strict diet. Rokitansky suggests injections of air or aspirations by means of a suction-pump. Other authorities maintain that these injections are extremely dangerous. Laparotomy has been done for intestinal obstruction. William Macewen, of Glasgow, did a successful operation on a child of nine months. It is very doubtful if many infants survive the operation. J. R. Comte, of Geneva (*Annual Univ. Med. Sciences*), "does not think that childhood is a contra-indication to laparotomy, but as collapse developes quickly, and as the heart's action has not matured, he advises prompt action."

PRACTICAL NOTES.

The Prevention of Bovine Tuberculosis.—The French Government has decreed that all cattle imported into France from foreign countries must be tested with tuberculin at the frontier before being admitted. In those cases in which the characteristic reactions denoting the existence of a tuberculous process are revealed the animals are, after being marked, refused entrance into the country unless the owner gives his consent to immediate slaughter. The tuberculin test is not applied to cattle which are formally declared to be imported for slaughtering purposes. In these cases, however, proof must be forthcoming within fourteen days that the beasts have been killed.—*Med. Rec., 1896, xlix, 597.*

The Emulsification of Cod Liver Oil.—With regard to the emulsification of cod liver oil, the author pointed out the many virtues of Irish moss, which contains about 70 per cent. of pectin or vegetable jelly, and had extraordinary powers of emulsification. The only disadvantage in its use was the liability of its solution to ferment under certain conditions; this might be got over by the addition of 5 per cent. of alcohol to the bulk, or a small quantity of elixir saccharini, which acted as a powerful anti-ferment as well as a sweetening agent. The formula he had found most satisfactory was:

Irish moss (picked)	1 dram.
Cold distilled water	5 ounces.

Allow the water to stand on the moss for one hour; then boil for ten minutes and strain through muslin and make up to five ounces. To this, in a bottle when nearly cold, add:

Cod liver oil	8 ounces.
Alcohol	1 ounce.
Water, to make	16 ounces.
Flavoring	q. s.

Use a quart bottle, shake the mucilage well round the sides, and then add the whole of the oil, and agitate to form a nucleus; then add half the water and lastly the alcohol, flavoring, and as much water as required to make up the quantity.

He could not see why such a preparation as an emulsion made by shaking together equal parts of the oil and lime-water, and properly flavored, should not come into general use. The two drugs were separately prescribed largely for rickets and spinal diseases in children, also the presence of lime-water would certainly help a delicate stomach to bear the oil. To completely mask the odor and taste of cod liver oil would be worth much gold to any man. He had found oil of wintergreen very useful, though it was not much used in this country. Each of the following three formulæ was sufficient for one pint of the finished product:

I.	Minims.
Oil of wintergreen	15
Oil of sassafras	15

II.	
Oil of Wintergreen	20
Oil of bitter almonds	20

III.	
Oil of neroli	12
Oil of bitter almond	12
Oil of clove	2

Oil of lemon appeared to be of little use. Elixir of saccharin he found very useful in bringing out the taste of the flavorings used.—*Arblaster, Am. Druggist, 1896, xxviii, 218.*

Egg has been utilized as an admixture to milk, or as its substitute, in a great many ways. Both the yelk and the albumen have been so employed. The white of an egg, with a little salt and six ounces of water, well beaten and shaken, is a good mixture, which can take the place of infant food only temporarily, but is an invaluable make-shift in severe intestinal catarrh, or a permanent nutriment in the same, when added to other food.—A. Jacobi.

Treatment of Infantile Bronchitis.—Dr. Renaut, of Lyons, employs warm baths in the treatment of bronchitis in infants, and claims that by these means the capillary form of the affection can be almost surely averted. Whenever the rectal temperature rises to 102° F. the child is placed for five minutes in a bath of 100° F., the head being covered with a folded handkerchief. If there are any symptoms of cerebral congestion, a stream of water of the temperature of the room is poured on the head. A little champagne, or brandy and water, may be given while the child is in the bath. When taken out, he is quickly dried with warm towels and put back to bed. Frequently, after the third or fourth bath, the fever falls, the râles diminish, and the affection loses its threatening character.—*Med. Rec., 1896, xlix, 636.*

Report on Diphtheria Antitoxin.—The Metropolitan Asylums Board of London has just issued a report of the results following the use of antitoxin in the treatment of diphtheria at the hospitals under the authority of the board. The results were obtained during the year 1895 in six hospitals in which cases of diphtheria were treated. The total number of cases treated with antitoxin was 2,182, in 615 of which the patients died, representing a mortality of 28.1 per cent. The drug was not used in all the cases which came under treatment, but, generally speaking, only in the severer instances. The death rate from diphtheria in 1894 was 29.6, while in 1895 it was 22.5, a reduction of 7.1 per cent. In the laryngeal cases during 1894 the mortality was 62.0, while in 1895 it was reduced to 41.8. In the tracheotomy cases it was 70.4 during 1894, but in 1895 the death rate fell to 49.3. Thus, the improvement in the mortality rate was as much as 20.2 per cent. in the laryngeal cases and 21.2 per cent. in the tracheotomy cases. The clinical results of treatment by antitoxin, noted in the report, were: Diminution of faucial swelling and of the consequent distress; lessening or entire cessation of the irritating and offensive discharge from the nose; limitation of the extension of membrane; earlier separation of the exudation; limitation and earlier separation of membrane in laryngeal cases; improvement in general condition and aspect of patients; prolongation of life, in cases which terminate fatally, to an extent not obtained with former methods of treatment. The report concludes with the following summary of the improved results in the diphtheria cases treated during the year 1895: A great reduction in the mortality of cases brought under treatment on the first and second day of illness; the lowering of the combined general mortality to a point below that of any former year; the still more remarkable reduction in the mortality of the laryngeal cases; the uniform improvement in the results of tracheotomy at each separate hospital; the beneficial effect produced on the clinical course of the disease.

Pediculi.—Oil of sassafras will destroy pediculi and their ova. —*Med. Rec.*

Editorial.

LA PERLECHE.

AT the last meeting of the Congress of obstetricians, gynecologists, and physicians for diseases of children, held at Bordeaux, Négrié reported that under his observation a child had been admitted to a hospital suffering from *la perlèche*, who later transmitted the disease to three other children and one female nurse.

This affection is by no means rare in France and probably exists also in this country, though as yet not reported by one of the titles by which it is recognized elsewhere. Almost every morning the physician watching the throng in attendance at the out-patient department of the St. Louis Hospital, at Paris, will see children brought there for treatment who are suffering from a disease where the diagnosis *la perlèche* is promptly made. Sooner or later under one title or another the disorder will certainly be reported in this country; and it is wise for those interested in the affections of children to be prepared to recognize the nature of the disorder, seeing that it is without question transmissible by contact.

The disease named in France *la perlèche*, or more popularly "*bidou*," is known among the Italians as "*male che corre*." It occurs almost exclusively among children and through them it is occasionally transmitted to adults in attendance within wards and nurseries. The lips are exclusively affected and as a rule the two lips, upper and lower, the latter, however, predominantly, with a marked tendency to involvement of the commissures. When inspected, the vermilion border and inner and outer folds of the labial surface for a short distance are seen to be covered somewhat irregularly with thin, light-colored crusts and scales, made up in part of macerated epithelium partly elevated from the underlying tissue, exhibiting beneath a reddish, occasionally a decidedly inflamed, surface. At the commissures of the lips there are often fissures and resulting blood-crusts, the latter conspicuous only in aggravated cases. The itching is slight and the tumefaction rarely extensive. The disease when untreated may last but for a few weeks or may persist for months. Relapses are not rare.

According to Lemaistre, the disorder is due to a streptococcus occurring in rather long chaplets, and termed by him streptococcus plicatelis. It is claimed that this micro-organism has been recognized in the water drunk by those affected with the disorder. The question of the contagiousness of the resulting affection is completely settled by its clinical history. By the use of weak ointments of ammoniated mercury, and by painting the lips with solutions of the bichloride of mercury one part to one thousand, in the tincture of benzoin, the symptoms can usually be promptly relieved.

The interesting feature of this disorder for the clinician is its contagiousness. It is chiefly spread by the use in common of drinking vessels by the infected and the healthy. In the matter of diagnosis, as distinguished from the seborrhoic eczemas of the lips, with which Besnier and Dayon seem disposed to align *la perlèche*, we have never seen the affection complicated with symptoms in other regions of the face, though it is to be remembered that the proof of the parasitic nature of seborrhoic eczema is very strong. With respect to the other eczemas of the lips often encountered in children, especially of the lower classes in society, we have never seen in *la perlèche* the characteristic snout-like deformity produced by projection of the lips when affected with eczema simplex, nor is the itching commonly so annoying in the contagious as in the other affection. One must be careful to exclude also the pustules about the lips, occurring for the most part in young girls with long hair, produced by picking the lips with finger nails charged with staphylococci, often in consequence of the irritation set up in the occipital region by pediculi infesting that part. Fissures of the angles of the mouth in the victims of inherited syphilis are commonly not difficult of determination when the other systemic symptoms present are taken into account. And, lastly, it is needful to recognize when such are present the toxic effects produced by application of the lips of the child to certain painted and dyed toys ; as also the mechanical irritations originating with the use of such articles as the penny-whistle and the blow-pipe.

JAMES NEVINS HYDE, M. D., Chicago.

Society Report.

NEW YORK ACADEMY OF MEDICINE—SECTION ON PEDIATRICS.

Stated Meeting, April 9, 1896.

A Case of Rachitis.—DR. HENRY DWIGHT CHAPIN presented a baby, two years old, brought from the poor tenement district of the city. The child had been born after a normal labor at full term, and had been breast-fed up to eleven months. The trouble, therefore, was not due to improper feeding in early life, but to the unsanitary surroundings. The child lived with a number of others in a dreadfully dark and ill-ventilated room. Dentition had been normal, beginning at seven months. The parents were fairly healthy, and the child had not been very badly fed. The child showed very well the atalectatic condition of the lungs, the sinking in of the chest walls, the prominent epiphyses at the wrists, and the flatulent distension of the belly. There was also a marked rachitic kyphos of the spinal column. The child had never been able to stand.

DR. A. JACOBI said that this case exemplified very well the lack of development of the muscles—a point to which he would allude in his paper. The so-called pseudo paralysis was a very characteristic condition. This case had probably developed very gradually (1) because there was no cranio-tabes, and (2) because dentition had been prompt and the teeth were well formed. It was evident, therefore, that the teeth were coming out when the rachitis developed as a result of the unsanitary conditions. He believed that rachitis was more often due to bad air and lack of sunshine than to bad feeding. Dr. Chapin had called attention to the fact that this child was rachitic, although breast-fed for eleven months. In this connection he desired to say that in exceptional cases the mother's milk was defective in quality, and therefore resulted in the development of rachitis.

Some Complications of Rachitis, and Points in the Differential Diagnosis.—DR. A. JACOBI read a paper with the above title. He said that rachitis showed itself first in those bones which were in the course of rapid development. The cranial bones grew most rapidly in early life, and that is the reason that cranio-tabes is not seen after the first few months of life. The rounding of the margins of the cranial bones is an important point in the diagnosis of these cases of rachitis where there is doubt. In the newly-born there was often found at the junction of the epiphysis and diaphysis an abnormal process of ossification. Syphilis and rachitis had been very frequently confounded. The clinical aspects presented in these two diseases about the epiphysis and diaphysis in the very young were often very similar; in older children, the diagnosis was more easily made. The syphilitic variety of osteo-chondritis generally begins about the fifth week, while in rachitis it develops later. While syphilis was undoubtedly a potent cause of rachitis, it was probable that there was no more rachitis among syphilitic infants than among others. An enlargement of the spleen was often observed in rachitis, and this was an indication of the existence of leucocytosis and impairment of the blood. In his experience, rachitis had been not infrequently complicated by pseudo-leukaemia. Such cases improved little, if at all, under the administration of iron. Arsenic was better, but the best of all was an anti-rachitic hygiene and management, and the internal administration of phosphorus. Bone marrow undergoes a lymphoid change in all these constitutional disorders, and hence it was to be expected to occur very readily in rachitis where the osseous system was specially affected. In rachitis the heart is usually small and the arteries large, and as a result, there is often a low blood pressure. This is often one of the reasons for the existence of hyperæmia in the epiphyses, so that under a very slight irritation a morbid process would be set up in the epiphyses. The whole rachitical process might be called physiological, but for its intensity and long duration. The slackened circulation of the blood appeared to be the cause of the "cerebral murmur" described as long ago as 1835. It also explained some of the visceral complications. The impulse of the heart was very perceptible on inspection and palpation, and the apex beat was diffused. The chest is triangular or quadrangular and flattened, and as a result, the heart touches a larger surface than in the normal chest. It is a fact that many tubercular fathers, like syphilitic mothers, have rachitic children. There is apparently only a predisposition to general debility and vulnerability. Rachitical children are apt to become tubercular, no matter what the cause of the rachitis. The rachitical chest is narrower than normal and misshapen, and the lungs are deficient in contractility and expansion. Nearly forty years ago Freund described the premature ossification of the sterno-costal junctions of the cartilages, and its probable effect on the lungs and the development of tuberculosis. Insufficient respiration meant insufficient respiration and obstruction, passive hyperæmia and bronchial catarrh. As the respiratory muscles were feeble, and the ribs soft, the atmospheric pressure tends to increase the predisposition to internal congestions. When foreign bodies gain entrance they are not easily expelled. Frequent attacks of bronchitis, lobular and lobar pneumonia, and tuberculosis are common results, therefore, of rachitis. The persistent irritation of the bronchial mucous membranes affects the neighboring mucous membranes, and hence, the swelling of the lymph glands is, in the vast majority of cases, secondary.

Nervous symptoms are frequent in rachitis. In most cases, nervous disturbances from gastro-intestinal causes may be readily diagnosticated. After they have been excluded, rachitis takes a prominent place. Insomnia is quite frequent. Many sleep better when carried about on the arm because the cerebral congestion is lessened in the erect posture. These children perspire copiously at night, and they rub their heads on the pillow so constantly that they become bald. It is a mistake to believe that foods which do not disturb the bowels are for that reason alone sufficient for nourishment. While sterilization and pasteurization and "modification" of milk have accomplished much, it does not follow that they make the best blood, or prevent the development of rachitis or anæmia.

Laryngismus, stridulus, hydrocephalus, tetany, nystagmus and spasmus nudens are not infrequent complications of rachitis. Hydrocephalus results from the sluggishness of the arterial circulation. In cranio-tabes, the hyperæmia is intense, both in the bones and in the meninges of the brain. Effusions are frequent, and are often absorbed. The brain of the rachitic child appears to be developed very favorably. These children often become in adult life excellent scholars and brain workers. If there were a history of rachitis with hydrocephalus, the diagnosis was easy. During the first stage of rachitic hydrocephalus the intellect is not disturbed. The rachitical form of hydrocephalus is by no means unpromising; comparatively few of them carry their trouble into the second decade. Sometimes attacks of laryngismus stridulus are followed by convulsions. It seems to be pretty well settled now that the large majority of those cases are dependent upon cranial rachitis. There are cases of laryngismus stridulus, however, that are not caused by cranial rachitis. It is occasionally observed in connection with enlargement of the thymus gland. Laryngismus stridulus is mostly met with before the age of nine months—in other words at the time when the cranial rachitis is most common. Tetany, Dr. Jacobi said, had been credited by many with three symptoms, claimed to be pathognomic, viz.: (1) Increased galvanic excitability; (2) the production of an attack of tetany by pressure in the popliteal space, and (3) the so-called "facial symptom"—tapping or gentle friction of the zygomatic arch produces a spasm of the upper lip and nasal ala. Much had been made of this symptom, but it was not always present. Cranial rachitis might run its full course without any striking symptoms, but, on the other hand, it might give rise to laryngismus stridulus or spasmus nudens.

The muscles of the newly-born and of infants were feeble. The ratio of the total weight of the muscles of the newly-born to that of children was 1 to 48, while that of the skeleton in the infant to that in the adult was 1 to 26. Squinting is a common condition among children, because their muscles of accommodation and motion are insufficient. "Growing pains" are often the result of over-exertion, and these are particularly noticeable in children suffering from rachitis. Strabismus and nystagmus are both very common in rachitical infants. There is often, also, in these cases, a motion of the head in the same, or in the opposite direction. Scoliosis is common in rachitic children. Babies being usually carried on one arm, if rachitic, are apt to be developed in a one-sided manner. The feebleness of the infant's muscles, as intensified by rachitis, is best shown by the symptoms due to insufficiency of the muscles of the intestine. It is a prolific cause of obstinate constipation in infancy. This form of constipation is to be differentiated from the many other varieties, including that form which the speaker had described many years ago under the name of "congenital constipation." In infants there are two or three sigmoid flexures, and, if one compresses the other, very obstinate constipation might be the result. It takes place under the most favorable circumstances immediately after birth, and hence it is easy to diagnosticate it from the rachitical variety. The syphilitic pseudo-paralysis of the upper extremities was described nearly fifty years ago.

DR. A. CAILLÉ said that syphilis, tuberculosis and rachitis were met with almost daily by physicians treating children, and they were constantly called upon to differentiate between rachitic muscular affections and other diseases. Only to-day he had seen what at first had appeared to be a pure drop-wrist, but which had proved to be nothing more than a true rachitic pseudo-paresis. The child had cranio-tabes, and the chest conformation characteristic of rachitis, and he had therefore given a favorable prognosis. Children with acute epiphysitis due to rachitis were often erroneously treated for rheumatism. If a physician saw a child, three or four months old, with swollen and very painful epiphyses, he was very apt to consider the case one of acute articular rheumatism, when in reality it was one of rachitis in all probability. The fat and chubby appearance of some rachitic children sometimes, but without good reason, prevented physicians from making a diagnosis of rachitis. It was possible to mistake sporadic cretinism for rachitis, but the stupid facial expression and the thickened and protruding tongue should enable one to distinguish sporadic cretinsism from rachitis. The typical forms of rachitis were easily recognized, but it was not so easy to detect rachitis in the very early stages. If in a given case one found cranio-tabes, or occasional slight elevations of temperature, or tenderness when handled, associated with constipation, one should be on guard for rachitis. As to the prevention of rachitis, he thought if pregnant women were given a fair proportion of carbo-hydrates and albuminoids in their food, and took sufficient fresh air and exercise, rachitic babies would not be so numerous.

Regarding the case presented by Dr. Chapin, the speaker remarked that it could not be said that rachitis was due here to unsanitary conditions. A child would thrive if the breast milk contained three per cent. of fat, and from one to three per cent. of albuminoids. In many nursing women the albuminoids were in excess of the fat, and a child fed on such milk would probably become rachitic. Again, when nursing women menstruated, the composition of milk would be changed for a few days each month. If in the inter-menstrual period the normal proportion of fat and albuminoids was present there was no occasion to take the child from the breast, but if a careful analysis of the breast milk showed an abnormal proportion of these ingredients, the physician might be justified in directing that the child be weaned.

DR. HENRY DWIGHT CHAPIN said, regarding the case he had presented, that he did not mean to say more than that the preponderating influence towards the development of rachitis was the unsanitary condition in which the child was placed. Moreover, it should be remembered that there was a certain element in regard to food which could not be determined in every instance simply by an analysis. Incipient rachitis was very common in this city, and among all classes. To be sure, rachitis was seen in a more advanced stage among the poor, but in a less marked form it was very common among the better classes. He had come to look upon enlargement of the costo-chondral articulation as a very valuable sign of incipient rachitis; it was one of the first and most easily detected signs of rachitic osseous change. The sweating about the head, and the tendency of the child to toss off the bedclothes were very important symptoms of early rickets. It was very important to recognize incipient rickets, not only because early treatment should be adopted, but because it had a strong tendency to modify and aggravate many infantile disorders. Such infants were peculiarly prone to develop obstinate and persistent coughs. The physician should be alert to detect this underlying condition, and should fully explain its nature and significance to the family in order that they will co-operate with him in his endeavors to eradicate this constitutional vice.

DR. FLOYD M. CRANDALL said that rachitic manifestations were especially frequent in certain regions of the body, and in individual cases the disease might expend itself on one of these regions. It was important to remember the important influence exerted by rachitis on the muscular system, for many in the profession still adhere to the old notion that rickets was due to a deficiency of lime salts. Treatment founded on such a belief would certainly be disappointing. Fat is one of the most important elements in an infant's diet, and is often present in insufficient quantity.

Dr. A. B. JUDSON said, regarding the case presented by Dr. Chapin, that possibly the absence of deformity in the lower limbs was to be explained by the fact that the child had not walked, and the limbs had not been obliged to sustain the weight of the body in the erect position. He thought there was a popular impression that adults who showed some traces of having had rachitis in childhood —such as bow-legs—were apt to have an unusually good muscular development.

THE CHAIRMAN emphasized the point made that the breast milk was not always the most suitable food for the infant, and the fallacy of the idea that because a child was nursing its food did not need investigation or alteration. The same remark applied to "modified milk." One of the most marked cases of rachitis that he had ever seen was a child who had been fed on "modified milk." Recently published articles would almost lead one to believe that tetany was an independent disorder, and was not due to rachitis.

DR. JACOBI, in closing the discussion, said a few words about treatment. While it was true that sterilization and pasteurization and modification had done a great deal for infant feeding, he had expressed years ago the opinion regarding the drawbacks of sterilization. He had been very favorably impressed with the "modified milk" at the time of his visit to the Gordon Laboratory in Boston, because he had been convinced that modified milk had a scientific basis. There could be no doubt that pasteurization and exact mixture of foods would relieve or prevent intestinal disorders, but from his own experience he knew that it undoubtedly failed as a perfect artificial food. He had found that when babies were kept upon this "modified milk" there were no intestinal disorders, but that rachitis, particularly cranial rachitis, was unusually common among the children fed on this milk. It had been necessary to correct the cranial rachitis by the addition of cereals and animal broths. This showed that "modified milk" still left much to be desired, and it was just as important to watch the child taking "modified milk" as one on any other food. He did not allow any baby on "modified milk" to remain on this exclusively for more than three or four months; he directed that animal broths should also be given. For many years he had found it very advantageous to prescribe the addition of oatmeal or barley to the food. The feeding in the first few months of life is all-important, for upon this the whole future of the child depends.

Mortality Among School Children in Boston.—Dr. S. H. Durgin, chairman of the Boston Board of Health, is authority for the statement that the mortality among school children in Boston is larger than in any other city in this country or in foreign countries. This is due largely, he says, to the unsanitary surroundings of the children in school. The rooms are unwashed and full of dust and dirt, the temperature in cold weather is kept abnormally high, and the air the children are compelled to breathe is abominable. This excessive mortality in Boston is despite a medical supervision of the schools which is claimed to be unique. A number of physicians are employed at a small annual salary. They visit the schools each morning, and are given a list of all the pupils who complain of illness or who appear to the teachers to be ill. They examine the children and send home those unfit to be in school with a report of the disease with which they are afflicted. During the first year of the operation of this plan 14,666 children were examined. Of these 9,188 were found to be sick, and 1,745 of that number were ill enough to be sent home. There were found 437 cases of infectious diseases, including 70 cases of diphtheria, 110 cases of scarlet fever, and as many of measles. There were discovered also many cases of diseases, such as impaired hearing and sight, not suspected by the children, parents or teachers.—*Ev. Post.*

Book Review.

THE HISTORY OF SURGICAL ANÆSTHESIA.

By H. Bellamy Gardner,

Assistant Anæsthetist to Charing Cross Hospital (Bailliere, Tyndall, Cox, London. Price, 1*s*.)

AT this moment when a movement is on foot to celebrate the jubilee of the discovery of anæsthetics by Morton, of Boston, U. S. A., in 1846, and by Simpson, of Edinburgh, in 1847, this little brochure of Mr. Gardner will be received with interest.

The early portion deals with researches among the writings of ancient and classical authors; next the poets and historians of the middle ages are reviewed, and lastly the discoveries by the great scientific chemists of the last century are placed in chronological order, which rendered possible the application of ether and nitrous oxide to surgical necessities.

Mr. Gardner advocates the use of a mixture of gas and oxygen for minor surgical operations, which affords "complete and sleep-like anæsthesia in which the cyanosis and jactitation attending the use of pure gas are eliminated," and he draws his experience from its use in 183 cases.

Hospitals in Pittsburg.—It is announeed that Henry C. Frick, chairman of the Carnegie Steel Company, will build a hospital for children on Squirrel Hill, Pittsburg, within the next year, at a cost of $500,000. The building will be erected on a plot of forty acres which Mr. Frick owns.—*Med. Rec.*

Professor Rusby in Venezuela.—Dr. Rusby, of the New York College of Pharmacy and of the editorial staff of Pediatrics, visiting the Orinoco River district as botanical expert to a company capitalists to ascertain what commercial products can be grown in the district and what drugs can be profitably produced there.

Diphtheria Antitoxin in Japan.—There were 353 cases of diphtheria treated by serum injections in Tokio during the year ending November 25, 1895. Of this number 31, or 8.78 per cent., died. In the statistics collected by Kitasato of 26,521 cases of diphtheria in Japan, treated before the introduction of serotherapy, the number of deaths was 14,996, a mortality of 56.54 per cent.—*Med. Rec., 1896, xlix, 491.*

Abstracts.

RETINACULA OF WEITBRECHT.

Professor **Fawcett** gave before the Bristol Med.-Chir. Soc. (*Bristol M.-Ch. J., 1896, xiv, 93*) a demonstration of the Retinacula of Weitbrecht, on which a paper by him was published in the *Journal of Anatomy and Physiology* for October, 1895. The neck of the femur is naturally a weak spot, because it is set on to the shaft at an angle and because it has to bear the weight of the body above it. During adult life it is strong enough for all emergencies, but in childhood and in old age the circumstances are very different. During childhood the head of the femur is united with the neck by a plate of cartilage, which is necessarily a source of weakness. In old age the cancellous and compact tissues of the neck of the femur become thinner and cause the neck to be consequently weaker. It is at these periods of life that the additional support afforded by these retinacula is most required. It is unlikely (1) that the periosteum surrounding the neck of the femur would be thickened along definite and constant lines if there were no cause for such thickening, or (2) that these bands exist for the mere purpose of anatomical demonstration or for the purpose of repair of fracture. As in the child the body-weight falls vertically over the head of the femur, we should expect to find two bands to prevent the head being displaced downwards, and we should not expect to find an anterior band because there would be nothing for it to do. An examination of the neck of a child's femur shows that such expectations are entirely realized. There are two bands, and two only, and they are in the positions we expect them to be—namely, above and below. These upper and lower bands are evidently there by heredity—there to be ready to mee the strain they will soon be called upon to bear, there to prevent th head being torn from the neck of the femur—two of them only, bcause they have to meet at first with a vertical strain. But when once the erect condition is naturally attained and the concomitant eversion of the limb bringing about the forward direction of the head and neck of the femur is established, the anterior part of the capsular ligament of the hip joint and the psoas magnus having in the meantime, through repeated efforts at attainment and maintenance of the erect position, become lengthened out, a new strain is brought to bear on the epiphyseo-diaphyseal joint between the head and neck of the femur—a strain which is directed downwards and forwards from above and behind, and this strain has to be met by another band. That band is the middle or anterior retinaculum of Weitbrecht as we see it in the youth and adult. We may take it, then, that the retinacula of Weitbrecht are the strengthening fibres of the capsular ligament (cervical ligament of Stanley) of the joint between the head and neck of the femur, and that they are called forth by strains exerted in certain directions, and they limit excessive demands of those strains, preserving, by doing so, the integrity of the region involved; that the cervical ligament of Stanley being periosteum fulfils the ordinary functions of periosteum—viz., those of repair and of nutrition; that the true function of the retinacula is prevention, not cure.

AMAUROSIS PRODUCED BY MALE FERN.

At the Medical Society of Buda-Pesth (*Ann. d'Ocul., 1895, cxiv, 134*), Dr. GROSZ reported a case. A man, aged 29, had been given by a pharmacist capsules containing ethereal extract of male fern and extract of pomegranate. He took about eight grammes of the combined medication, after previously taking castor oil. Hitherto vision had been perfect in the right eye, somewhat weak in the left. In the evening he had syncope, the next day severe diarrhea, and two days later he was blind in both eyes. On examination there was complete mydriasis, no pupil reaction to light. At first the fundus of each eye was normal, but little by little both lost their color, and became atrophic. The noxious influence was attributed to the extract of male fern, which is toxic in doses of four to five grammes.

Prof. MASIUS reported to the Academy of Medicine of Belgium (*Med. Week, 1895, iii, 321*) the results of some experiments on dogs, made to ascertain whether the amaurosis, which he had also noticed in two cases to follow the administration of oleoresin of male fern for ankylostomata, was due to the anæmia caused by the worms, or to the remedy used to destroy them. Of four dogs, two rapidly became blind after taking large doses of the male fern. In a later communication Masius (*Ibid., 585*) gave the result of researches he had made with Dr. Mahaim on the anatomical lesions of the optic nerve produced in poisoning by the oleoresin of male fern. The primary lesion is vascular, and consists in proliferation of capillaries with cell infiltration of the perivascular space. This determines at a very early date strangulation of the optic nerve in the foramen opticum; later on nothing is found at this spot but a homogeneous mass constituting a thick wall for the capillaries. Further advance shows disappearance of the nerve fibres, the last ones to persist being those situated near the retina.

POULSON, of Strasburg, has lately shown that among the extractives from male fern, anhydrous crystalline filicic acid is neither a poison nor a vermifuge, while amorphous filicic acid possesses both these properties in a high degree. VAN AUBEL, of Liége (*Ibid.*, *479*), attributes the amaurosis to the filicic acid, which stimulates the central nervous system, especially the spinal cord, and may, by extending to the sympathetic system, cause dilatation of the pupils, stimulation of the vasomotor nerves, and contraction of the central arteries of the retina; on this hypothesis strychnine and nitrite of amyl might be useful remedies.

Dr. HILBERT (*Ibid.*, *430*), a German physician, has had under observation a middle-aged man, who, to cure headache, took a gramme and, half an hour later, two grammes of acetanilide (antifebrin). The headache soon ceased, but the patient was affected with vertigo, noises in the ears and defective vision, so that he could barely see fingers at a foot. The skin and mucous membranes were pale. There was no reaction of the pupils, the optic discs were bloodless, the retinal vessels were contracted; all these phenomena, including amblyopia, yielded promptly to inhalations of amyl nitrite.—*Brist. M.-Ch. J.*, *1896*, *xiv*, *46*.

HYDATID OF THE LIVER.

DONNELLY presented to the Toledo Med. Assoc. (*Cleveland J. of M.*, *1896*, *i*, *158*) this case: The boy, aged 12, had good health until a few weeks before he was presented for examination. When seen he was anæmic and pale, his skin was cold and clammy, eyes sunken, and he had a wasted appearance due to pain. A few weeks ago he was taken with gastric disturbance, nausea, vomiting and abdominal distension. This distension was principally in the epigastrium and umbilical area. The superficial abdominal veins were engorged with blood and could be easily traced.

On percussion of the abdomen there was complete dullness over the area of the tumor; it extended from the right axillary line to the median line and from the seventh rib to a line drawn from the anterior superior iliac spine. The tumor was hard-elastic to the touch and nodular. The tumor was movable with the liver, that is, the tumor could not be moved unless the liver also moved, showing that it was in direct connection with or sprung from that organ.

Examination of the blood gave negative results, as did also examination of the urine. The patient was put upon mercuric bichlorid 1-30 gr. with bitter tonics. Exploratory operation was advised, but the patient would not allow any operative procedure. He has improved upon the alterative form of treatment, and when last seen the tumor had not changed, except that it was more nodular than before.

The boy has now a good appetite and all gastric disturbances have ceased. His bowels move naturally and the feces are of a normal color. The urine is normal. He still complains, however, of considerable frontal headache.

SCURVY IN BOTTLE-FED BABIES.

FRANK W. GARBER (*Therapeutic Gaz., 1896, xx, 226*) says that scorbutus is one of those diseases with which the practitioner of to-day has but little clinical acquaintance. The older physicians, and especially those of seaboard towns or those who have served in the army or navy, can recall it as one of the scourges of both land and sea. To have learned its causes and thoroughly provided against them—for it is only now and then in these days that a case is found—seems one of the most splendid monuments scientific preventive medicine has erected to itself. So many brilliant advances have been made in surgery in the last few years that we are apt to be dazzled by the splendor of its results, and to forget the even greater luster of preventive medicine.

Though the history of scorbutus is coexistent with the history of medicine, it is only during the last twenty years that the disease has formed any part of medical literature relating to infancy or childhood. It is probable that cases always existed among infants or children where the peculiar dietetic vices necessary to its production existed, but it is also probable that the increased use of artificial baby-foods has been in some way related to the more frequent appearance of the disease in these latter years. It is altogether likely that many of us have met scorbutus in its incipiency among infants and have not recognized the nature of the trouble. He reports two cases, viz.:

CASE I.—J. L., female, age fourteen months. American parentage. The child had received intelligent care, and had lived under comfortable and hygienic conditions; it was bottle-fed, the food alternating between condensed milk and malted milk, upon which it did apparently well for its first year. When about a year old, the mother noticed it did not care to sit up as much as usual, and seemed to be in pain when lifted up or placed in a position where it would have to continue sitting upright by its own effort. It avoided muscular exertion. The child looked worn and sick. It cried frequently as if in pain. There seemed to be quite general tenderness to touch, even the gentlest manipulations causing it to cry out. The thighs were tender, as was the dorsal region of the spine. The gums were slightly ecchymotic and swollen, and there were purpuric patches in the upper lid of the left eye. There was some looseness of the bowels, abdominal distention, and a temperature of 102°. The stomach was not in good condition. As at that time summer diarrhea was more or less prevalent, the case was thought to be of that nature, and treatment was ordered accordingly. The significance of the swollen, ecchymotic gums, and the purpuric spots in the eyelid was wholly misunderstood. It was thought that the child had received a bump over its eye, and of course it was cutting teeth.

As the child was apparently not doing well on the prepared food, the latter was ordered discontinued, and a diet of which fresh sterilized milk with sweet cream and lime-water were the main ingredients was substituted. The child improved rapidly, and at the end of a month most of the scorbutic symptoms had disappeared. When the bowels had become normal in their action, the mother was instructed to give the child some soft egg, milk toast, and a small amount of potato.

Case II.—B. C., female, aged nine months. Bottle-fed from birth. For the first three months it was given condensed milk in the proportion of fourteen parts of water to one of condensed milk. At the end of this period it was given Mellin's Food in addition. It had never been given anything at the table or in addition to the two articles mentioned. At eight and a half months, or about two weeks before it was brought to me, it was given about a pint of fresh milk every twenty-four hours, along with Mellin's Food. It began to be tender in the lower limbs at about five months. The lower incisors were cut at five months, and the upper at eight. At about the seventh month the gums were seen to be swollen and ecchymotic. For some time previous to this visit—June 27, 1895—it had not cared to sit up. The mother said "its back seemed sore." There had been almost habitual constipation. About four weeks before this time both eyes began to protrude from their sockets, and the soft tissues round about them seemed deeply and copiously infiltrated with blood. It was the ordinary "black eye," with exophthalmos. There was great general tenderness of the body, with very little voluntary movement of the lower limbs. The baby was pale, fretful, and very restless. It did not like to be disturbed, and screamed whenever I came near. There was no apparent enlargement of the epiphyses, but the thighs seemed very tender.

A diagnosis of scurvy was made, and the parents were given to understand that the treatment must be almost wholly dietetic. The child was ordered to be placed on fresh milk, raw-beef juice, fruit juice and potato. The parents objected very strongly to this radical change, at first, but were made to see its necessity.

On July 6, nine days after the treatment was begun, the proptosis was disappearing; the face had a better look; there was freer movement of the limbs, less general soreness, and the ecchymosis about the eye was fading. The case then passed out of sight for over three months, during which time the child passed successfully through an attack of measles and one of summer diarrhea. The child is well.

Let us summarize briefly the common symptoms of the disease as we find them in the class of cases under consideration: The baby has a worn and fretful look, a bloodless and often muddy skin; its eyes may be bulging, with ecchymotic patches in the upper lids, or there may be ecchymosis without the prominent eye; the child is peevish and often screams at your approach; the breath is foul; the gums are swollen, tender, and often ecchymotic—they extend down over the teeth, and bleed easily when touched; the tongue is covered with a dirty yellowish-brown coat; there is general muscular tenderness; the spine is often painful or sensitive to touch; the child is disinclined to sit up without support, and moves as if in pain; the thighs are swollen, very tender, and often have a shining appearance; there is often thickening of the lower end of the femur; sensation is acute, but muscular power is weak; there may be immobility of the lower limbs amounting almost to paralysis; there is a tendency toward easy fracture of the femur, the break occurring near the epiphysis. There is sometimes general purpura; indeed, these purpuric spots may be your first intimation of the constitutional vice lying back of them.

The pathology of scurvy, whether in infant or adult, is obscure. In the baby one lesion has been found with marked uniformity where post-mortem examinations could be had, viz., the extravasation of blood between the bone and periosteum. Wide areas of bone are often thus stripped and left with small nutritive supplies. This accounts for the tender and swollen thighs. The swollen and bleeding gums and the exophthalmos are also due to extravasations of blood. An examination of the blood of those suffering with scurvy has shown a notable lessening of red corpuscles and of coloring matter, in some instances amounting to over half the normal.

In the baby the cause of scurvy is probably always dietetic. Just how the condition is brought about would be hard, and perhaps impossible, to say. The change is probably at bottom a chemical one. In the absence of fresh foods containing certain salts and acids, there seems to be a weakening of tissue metabolism. It is chemico-physiological—the absence of the chemicals contained in fresh vegetable food or its derivatives determining the phenomena of scurvy, or their presence producing health.

The question of prevention is more than one of fresh foods; it is one of fresh foods given in such form as to insure as little chemical change from a certain (not yet well defined) standard as possible. For instance, it has been found that scurvy may follow the use of fresh sterilized milk. Either with the application of heat has come about some new chemical combinations, or there may have been a destruction of germs necessary to chemical changes demanded by the baby organism in its food.

There has been a too ready disposition to recommend some of the many prepared baby-foods on the market, or to prescribe condensed milk. So commonly is this done that many parents put their bottle-fed babies on these articles without consulting the physician at all. These methods are not creditable to the physician, and, in the light of our recent knowledge, are most culpable. There may be instances—and these are especially liable to occur in our large cities—where fresh, wholesome milk is not to be had, where it becomes necessary to prescribe some one of the prepared foods. When this is done, however, the parents should always be instructed to give the child daily fruit juice, fresh-meat juice, or a small amount of some fresh vegetable broth. With these precautions, no doubt prepared foods may be safely and often advantageously given.

The treatment of scurvy in babies has already been quite fully outlined. It is evident that, the cause being improper diet, the treatment should be dietetic. Drugs play an unimportant rôle. Bitter tonics, acids, and iron may be used, but nothing can take the place of fresh fruits, vegetables and meats. The form in which these shall be given must be determined by the conditions of the individual case.

Remember that scurvy in bottle-fed babies is probably more common than we suspect. Its pathognomonic signs are swollen and bleeding gums, swollen and tender thighs, purpuric spots—these three, no two of which are absent in any case.

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THE POLYARTHRITIS OF SCARLET FEVER.*

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THE acute infectious diseases are quite universally supposed to leave as a specific sequel of their occurrence a predisposition to the subsequent development of chronic osteitis, both of tubercular and non-tubercular character. How much truth there is in this assumption is doubtful, for two reasons: first, the more or less direct connection in point of time between the occurrence of the earliest joint manifestation and the infectious disease does not prove a specific etiological connection between the two maladies; for it is fair to assume that any cause that reduces the vital forces predisposes the body to all forms of tubercular disease, and that in this way only do the acute infectious maladies act as causative agents in the production of chronic joint disease. Secondly, the universality of the occurrence of the acute infectious diseases is such that very few cases of chronic joint disease can fail to recall having been the subject of measles, scarlet fever, or mumps at some time previous to the development of the joint manifestations. I have, accordingly, been extremely skeptical as to the etiological connection between chronic joint disease and the acute infectious diseases. This feeling of doubt has led me to observe and study with especial interest a series of *joint complications* occurring in the course of scarlet fever. Joint affections are more frequent in this disease than in any other of the acute infectious diseases; and I believe that a study of the behavior of these manifestations in this disease may help to give some clue to the relation between the acute infectious maladies and chronic joint diseases. I have to present six cases, seen during my service of two months in the summer of 1895 at the hospital. The histories of the cases may be summarized briefly as follows :

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* Read before the N. Y. Academy of Medicine, May 7, 1896.

CASE 1. R. McC., aged 20 years, female. Beginning of illness July 27; discharged cured August 27, 1895. General condition was robust. Scarlet fever eruption well marked at time of admission.

August 1. Highest temperature while in the hospital, 103.6° F. Lungs and heart normal at time of admission. No previous history of rheumatism. Exudate (no Loefler bacilli) on left tonsil and uvula.

August 2. Patient complains of pain in left arm ; urine 12 ounces in 12 hours ; albumin 10 per cent.

August 3. Pains in both wrists and knees. Slight swelling of both wrists ; both joints excessively tender.

August 5. Joint pains and swelling disappeared. Albumin diminished to a trace. After this urine gradually increased in quantity to normal ; albumin disappeared ; no more joint manifestations. Recovery.

CASE 2. M. V., age 3½ years, female. Beginning of illness July 15 ; discharged cured August 16. General condition good. Entered the hospital July 22, desquamating. Highest temperature while in the hospital 105° F. At the time of admission lungs and heart were normal. Diphtheria (Loefler) was present.

August 3. Throat clear of membrane and bacilli.

August 4. Sudden rise of temperature from 98.5 to 105.0, accompanied by tenderness, with swelling and redness of metacarpophalangeal articulation of third finger of right hand. No heart lesion ; 25 ounces of urine in 24 hours. A trace of albumin.

August 6. Finger improved.

August 7. Complains of pain in left shoulder and forearm. No cardiac lesion. In three or four places over the body there are little petecheal papules with indurated areolae. In one spot a small pustule has formed.

August 8. Left shoulder swollen and tender. Any movement of arm excites pain.

August 9. Shoulder about the same. Heart's action slightly irregular. Second sound is accentuated beard at the apex.

August 12. Left shoulder immovable. Arm held rigidly to the side.

August 13. Tenderness and swelling at the shoulder diminished ; she is using the arm more freely.

August 14. Free from pain in shoulder, but joint still somewhat rigid.

August 16. Shoulder almost well. Discharged.

CASE 3. T. V., aged 7 years, male. Beginning of scarlet fever July 14. Admitted July 22, desquamating. Discharged cured August 20. Highest temperature while in the hospital 106.6° ;

lowest 96°. General condition at time of admission is good. Heart and lungs are normal; urine normal.

July 29. Urine 13 ounces in 24 hours; albumin 11 per cent.

July 21. There is dullness at base of right lung, posteriorly. An eruption of large and discrete papules with a few petechiae is present. He complains of pain in left forearm. Urine contains albumin and casts. 12 p. m. heart is irregular and temperature 96°.

August 1. Pain in left hand.

August 3. Albumin diminished; heart normal; pain in fingers and left wrist; also in left knee; swelling of left knee.

August 7. Swelling of knee diminished; left wrist quite movable. Left leg flexed upon thigh at an angle of 90°, resists extension.

August 9. Complains of severe pain in knee; pain has disappeared in left elbow, allowing of free manipulation. Swelling in left knee still marked; angle of flexion at knee is increased. Heart irregular. No murmur.

August 10. Left knee less swollen, permits of almost complete extension.

August 13. Arthritis is now confined to knee, which is still very painful.

August 17. Left knee still swollen and intensely sensitive to manipulation. Nocturnal cries during sleep.

August 20. Discharged with stiff and sensitive knee joint. Swelling has disappeared; patient is improving.

Case 4. M. McC., age 8 years, female. Admitted July 9, in second day of scarlet fever. General condition is delicate; eruption fair. Highest temperature while under treatment 104°. Lungs normal. Heart normal.

August 9. Complains of pain in arm, hands and feet. Urine contains a trace of albumin, diminished in quantity.

August 12. Left hand and wrist considerably swollen, inflamed and tender; no rise in temperature.

August 13. Pain in left hand and wrist, which are still swollen.

August 16. Hand and wrist still slightly swollen and tender, but little pain on motion.

Case 5. J. R., age 4 years, male. Admitted June 19, sixth day of scarlet fever. Eruption faded with complicating diphtheria (Loefler). Highest temperature while at hospital 103½°.

July 9. Left knee swollen and tender and held flexed at an angle of 120°. Passive motion permits of extension, but causes much pain. Right hand swollen and tender. Great toe of left foot swollen. Nocturnal cries. First heart sound indistinct at apex. No murmur. Urine normal.

August 5. Right hand much better.

August 6. Affected joints considerably improved, the right hand less swollen and moved with but little pain. Left knee is less swollen, and joint can be extended to a further extent before patient cries out.

August 8. Swelling and tenderness in right hand and left knee greatly lessened; passive motion excites but little resistance.

August 10. Hand and wrist still swollen, but permit of free movement.

August 13. Left knee is less tender and permits of free flexion and incomplete extension; there is, however, considerable effusion into the joint.

August 16. Still considerable effusion into knee joint, but there is no pain, and the patient can extend the leg himself. Discharged.

Case 6. A. C., age 4 years, male. Admitted June 15, sixth day of scarlet fever. Eruption fair. Highest temperature while under treatment 104°. No heart lesion.

July 26. Left wrist swollen and very tender; pressure elicits pain. Right ankle and index finger of right hand swollen and painful. No sudden rise of temperature.

August 6. Left wrist less tender. Index finger of right hand is swollen and red and shows fluctuation. An incision over the second phalangeal joint evacuated pus and a serous fluid.

August 7. Swelling of lower radio-ulnar, articulation has increased, but there is no more redness or tenderness.

August 8. The swelling at left wrist and hand is greater. Right index finger still swollen but less inflamed and not discharging. Healing is going on slowly.

August 9. Patient very restless; pain in left wrist; reduplication of second sound of heart, heard over pulmonary semi-lunar.

August 10. Wrist still swollen and tender. Any attempt at pronation and suppination causes pain. Right index finger inflamed and swollen, discharging a thin bloody fluid and a little pus.

August 13. Free from pain. Wrist still stiff and anchylosed. Any attempt at pronation and suppination of the arm results in rotation at the shoulder. Right index finger presents no change.

August 16. Left wrist shows signs of fluctuation with pointing. Abscess apparently superficial. Right index finger is still much swollen and inflamed. There is a small discharge of pus. A probe passed into the sinus reveals bare bone. Transferred.,

This series of cases, although only six in number, is still a large number when it is remembered that this affection is comparatively infrequent.

In private family practice, although a very large number of cases of scarlet fever have been under my care, I can recall only occasional cases, and these for the most part mild, in an experience of fourteen years. In hospital practice during the summer of 1894, I remember only three cases of polyarthritis, complicating scarlet fever, and I have been told that during the winter of 1895-96 there have been but two cases of arthritis in the scarlet fever pavilion of the Willard Parker Hospital. After the group of cases above reported had been discharged, quite a period elapsed when no cases of arthritis were seen at the scarlet fever hospital. Cases two and three were brother and sister.

The title polyarthritis for this complication is applicable, for the reason that in all of the cases, the reports of which I have seen, and all of the cases that have come under my own observation, have had more than one joint affected. Indeed, in most cases many joints have been affected, and the arthritis has been present in the joints of both sides of the body; this in contradiction to the report of several authorities that the lesion is unilateral, affecting the joints on one or the other side only. That the lesion is an arthritis and affecting any or all of the structures that form the joint primarily or secondarily will be shown when I come to discuss the pathology of the affection.

The individual joints that were affected in these cases were as follows:

CASE 1. Left knee and wrist. Right knee and wrist.

CASE 2. Left shoulder. Right hand (metacarpo-phalangeal articulation).

CASE 3. Left fingers, wrist and elbow. Left knee.

CASE 4. Left finger and wrist.

CASE 5. Left knee and left great toe. Right hand.

CASE 6. Left wrist. Right ankle and index finger.

It will be seen that the left side of the body was more frequently affected than the right. Every one of these cases had joints on the left side inflamed, while only four of the cases had inflammation of joints on the right side of the body. It will be observed that the smaller joints, those toward the periphery of the extremities, such as the joints of the hand and foot, wrist, elbow and knee, are more apt to be affected. In only one case was the left shoulder joint affected, while the hip joint was not the seat of inflammation in any of the cases. It has generally been stated by those who recorded cases of this kind that the onset of the joint complication was accompanied by a sudden rise of temperature. I have not found this to be the case generally; the joint lesion occurred suddenly in most of the cases, without producing any great oscilation upon the temperature chart. The one exception to this rule was Case 2, in which the onset of the arthritis was accompanied by a sudden rise of temperature from 98.5 to 105° F.; this temperature quite rapidly subsided, long before the joint symptoms yielded.

It is interesting to observe what other complications these cases of scarlet fever were affected by in addition to the arthritis.

CASE 1. Pseudo-diphtheria and nephritis (as evidenced by examination of urine).

CASE 2. True diphtheria; slight albuminuria and a papular petecheal eruption.

CASE 3. Nephritis and papular petecheal eruption.

CASE 4. Nephritis.

CASE 5. Diphtheria (true).

CASE 6. Very severe case of polyarthritis, albuminuria.

It will be seen that the most frequent complication in addition to the arthritis in my cases has been nephritis. One of the cases has had pseudo-diphtheria and two true diphtheria. Two of them had a papular petecheal eruption. None of my cases had endocarditis, pericarditis, or any audible lesion of the heart, although heart lesions were sought for carefully from day to day. None of the cases had pneumonia or meningitis as a complication.

Case 6 was the only one that showed any signs of a purulent inflammation in the joint (one of the fingers and wrist), as evidenced by fluctuation and subsequent incision. This case also was the only case that showed any signs of necrosis of the bone ends. Inasmuch as five of my cases ended in almost perfect recovery, while one was discharged with two suppurating joints, but otherwise well, I think that it may be permitted me to state that the occurrence of polyarthritis, as a complication of scarlet fever, does not, in my opinion, render the prognosis of the scarlet fever, as far as regards danger to life, any worse *per se*. I say this in contradiction to the view held by many writers that polyarthritis occurs only in cases of scarlet fever that are extremely apt to die. I do not recall any case that I have seen during the past two years in which the patient did not make a fairly good recovery. Disability of a more or less chronic character occurred in some of the joints affected, but even this yielded to appropriate treatment. The clinical history of the cases that I have observed showed that the lesion was not a synovitis pure and simple, but the physical examination showed that most of the anatomical structures of the joint were involved in the inflammatory process, so that we may well call the disease an arthritis. It is important to note that all of these cases, with the exception of the first case, occurred as a complication of the desquamative stage of the eruption. The first case occurred on the ninth day of the disease when desquamation had not yet set in, but the eruption had disappeared.

Although all of the cases I present in this paper were seen as a complication of scarlet fever, a polyarthritis of a similar kind occurs in the course of other acute infectious diseases, notably in smallpox, epidemic parotitis, gonorrhœa, diphtheria, measles, puerperal fever, erysipelas, typhoid fever and typhus. In most of these diseases however, the disease is seldom a polyarthritis. Thus I recall a case of acute suppurative arthritis of the right shoulder joint in an infant suffering from erysipelas. In this case the joint had to be incised and drained. There was an osteitis of the humerus resulting in partial anchylosis of the joint. As to the character of the joint lesions, my own cases for the most part presented the symptoms of simple arthritis. In two of the cases the symptoms of an osteitis were present. There was retarded mobility of the joint and reflex muscular spasm (knee joint case). In one case there was evidently a periostitis of the tibia. In the sixth case there was necrosis of the joint end of the phalanx, with suppurative arthritis of this joint as well as of the wrist. Although none of my cases were examples of extreme purulent osteitis and arthritis, yet such cases do occur, and generally with a fatal termination. In these cases the joint lesions must be considered the result of general septic infection or perhaps of joint infarctions, analagous, for instance, to cases of gangrenous pneumonia occurring as a complication of diphtheria.

We have, then, four varieties of polyarthritis when it occurs as a complication of scarlet fever, or, indeed, other acute infectious diseases. First, cases in which there is a simple inflammation of the joint structures without effusion of serum and with little swelling. Second, cases in which the clinical symptoms are chiefly those of synovitis. The other structures of the joint are in an acute inflammatory condition, but this gradually subsides as the swelling and effusion subsides. Thirdly, there are a group of cases in which the arthritis consists of a simple or later a purulent synovitis, accompanied by or terminating in osteitis with or without necrosis of the affected joint ends of the bones. And, finally, there is the fourth class of cases, in which as I have said there is in its very inception a suppurative polyarthritis, with purulent inflammation of even the shafts of the bones and rapid destruction of all the joint structures. So rapidly fatal is this destructive process, or the constitutional condition which causes it, that it seems to have lent the hopelessness of the prognosis of this class of cases to polyarthritis as a complication in the minds of those who have unfortunately seen only this form of the affection.

As to the bacteriological cause of this complication, the opinions of the different authorities do not agree. It appears highly probable, however, that the polyarthritis is not produced by the specific germ of the scarlet fever, but is the result of mixed infection. It is well known that complications of true diphtheria and other infectious diseases are the result of the absorption into the lymphatics and circulation of streptococci and different varieties of pus-organisms. Indeed numerous forms of micrococci, such as the diplococcus and streptococcus, have been found in these joints. Some experimenters even claim to have caused these joint lesions by injecting pure cultures of the streptococcus into the joints of rabbits and guinea pigs. My own experiments in this direction have been unsuccessful in producing any joint lesion. I injected into the hip joints of guinea pigs 1 c. c. of a pure culture of a streptococcus, furnished me through the kindness of Dr. Park, at the bacteriological laboratory of the Board of Health, and the animals died in less than 24 hours. Smaller doses ¼ c. c. of the same culture of streptococcus injected into the hip joints of two guinea pigs did not in any way injure the animals, the joint remaining absolutely sound and healthy. Subsequent injections of increasing doses were well borne, the animals becoming gradually immunized to the increased dose of the pure culture. Nevertheless, other experimenters, as I have already stated, have produced joint lesions by such injections.

It is easy to understand where the absorption of the streptococcus and other germs helping to produce the mixed in fection in these cases occurs. It is evidently in the throat, and chiefly in the nose and pharynx. For here we find in scarlet fever in a very large percentage of the cases, a complication itself the result of a mixed infection.

Several of the cases which I report had true diphtheria with Loeffler bacilli in the cultures. Others had pseudo-diphtheria with streptococci and other germs in the cultures. Indeed, a culture taken from a scarlatinous throat will generally reveal the presence of large numbers of streptococci with or without false membrane. The mucous membrane of the throat in all of these cases being inflamed it is in good condition for absorption to take place both through the lymphatics and circulation. The mucous glands and follicle sometimes are the seat of minute abscesses with the ducts clogged, and it is easy to understand how infection occurs and how a small abscess of a tonsillar crypt may in rare cases result in fatal pyæmic polyarthritis or in the ordinary cases in the polyarthritis which I have described.

The time of the occurrence of arthritis as a complication of scarlet fever, that is to say the stage of the diseases in which it occurs has been almost uniformly both in my own experience and that of others, the stage of desquamation or later. This circumstance would speak in favor of a secondary infection by streptococci, staphylococci or other germs as a cause of the joint complication. Were the specific germs of scarlet fever the pathogenic cause of this complication we should expect many cases to occur with the inception of the disease. But I cannot recall any such cases in my own experience, and I do not know of any reported cases. Streptococcus infections occurring as complications of other diseases generally occur in the later stages of such diseases, and the joint manifestations of scarlet fever would seem to be no exception to the rule.

I furthermore believe, as already stated, that there is a contagious element in these cases, both owing to the greater frequency of such cases in hospital practice where numbers of scarlet fever cases are kept together, and also because of the bacteriological etiology of the disease, while this contagion is probably even less in degree than that of pneumonia complicating diphtheria, or even primary pneumonia, yet there seems to be the highest probability that it exists. In this connection it is interesting to note that two of my cases were brother and sister.

It will be observed that the cases I have reported all suffered from a greater or less degree of nephritis. In most of the cases the nephritis preceded the occurrence of the joint lesion. It is commonly understood that the nephritis of scarlet fever is the result of mixed infection. The joint lesions and the nephritis should be looked upon as manifestations of the same infection. Certainly there seems to be no ground to consider that the former is in any way the result of the disturbed action of the kidneys.

Many writers have considered these joint complications of scarlet fever as identical with rheumatism. Indeed the complication is frequently termed scarletinal rheumatism. Clinically, the affection certainly resembles rheumatism in some respects. In both conditions many joints are apt to be affected. In both the amount of inflammation varies from a vague feeling of soreness to an intense inflammation of the joints. But to counterbalance these points of resemblance there are many points of difference. In this complication while the largest joints are immune, rheumatism may affect the larger joints, such as the hip, as frequently as the smaller. In acute articular rheumatism the inflammation seldom goes further than rheumatic synovitis, while in scarlatinous polyarthritis the inflammation may affect all of the joint structures and much more frequently terminates in purulent arthritis and necrosis of the joint ends of the bones. Cases of osteomyelitis and inflammations of the shafts of the bones are reported. While rheumatism is a primary disease these joint complications are evidently secondary septic manifestations. The frequency with which rheumatism is complicated by endocarditis and pericarditis is well known. In the cases of polyarthritis which I present not a single one gave any clinical symptoms of a lesion of the heart. In none of my cases was there any sign of inflammation of any of the serous membranes, except those of the joints; there was in no case pleurisy, pericarditis, peritonitis or meningitis.

Furthermore, although the therapeutic test as applied to differential diagnosis is generally an unreliable one, yet in the case of rheumatism the specific action of the salicylates is so well recognized that it may almost be accepted, that, given a number of cases of rheumatism, distinct benefit in a large majority of them will be derived by a proper use of this drug. I have not found that cases of polyarthritis of scarlet fever were benefited to any appreciable extent by the use of salicylic acid and its compounds. On the contrary, the arthritis of scarlet fever is not in any way modified by this class of drugs. These considerations lead me to express my adherence to the view that the polyarthritis of scarlet fever is not a rheumatic manifestation, and that thereis nothing in common in the complications, prognosis and therapeutics of the two conditions.

The cases, which are the subject of this paper, ran a comparatively benign course, terminating, with the exception of the last case, in absolute recovery. This is not, however, uniformly so, and the prognosis of individual cases varies with the extent of the joint lesion. In many cases there is clinically nothing but pain and tenderness about the affected joints, with scarcely any objective symptoms. Even the function of the joints may be very slightly disturbed. In other cases there is much swelling of the joint, with pain and tenderness, and the proper movements of the joint are very much inhibited. When these acute symptoms subside some cases go on to perfect recovery, others gradually lose the tenderness and pain on slightest motion, but the function of the joint is not found to be completely restored. There is limitation of motion, and any attempt to force motion beyond a certain arc results in a reflex muscular spasm, which can only be overcome when the patient is under the influence of ether. These cases terminate in a pseudo or partial anchylosis, and require massage and passive motion for its removal. But even these cases gradually improve, although slowly, the limitation of motion in the joint becomes less and less marked, and the patient goes on to perfect recovery. In the third class of cases the inflammation affects the bone ends, and osteitis with all of its clinical manifestations results, and the patient develops a chronic joint lesion. In the fourth class of cases the synovitis in its incipiency is a purulent one, accompanied by much constitutional disturbance. The affected joint becomes rapidly disorganized, other septic manifestations, not only in the joints, but in the shafts of the bones, the viscera and other tissues of the body, show themselves and the patient dies, with the symptoms of general septicæmia.

It is the second and third class of cases that are of especial interest to the orthopedist. The former because the false anchylosis which occurs as the result of the acute arthritis is frequently mistaken by the general practitioner for chronic joint disease. He may treat these with rest, extension, etc., when the direct contrary treatment, massage, passive motion, etc., is indicated ; the latter, on account of the evident chronic character of the joint lesion. In this stage these joints are generally handed over to the orthopedic surgeon for treatment, and it is this class of cases in which the inflammation affects the articular ends of the bones, that an etiological connection between the acute infectious diseases and osteitis can be positively affirmed.

Here I may be permitted to say something as to the relation, in an etiological sense, between chronic joint diseases and the acute infectious diseases. These diseases are most common in childhood and to them has been described an important influence in the production of chronic joint diseases. They could exert such an influence in two ways. First, by giving rise to arthritis as a complication of the acute infectious disease, as in the cases under discussion, such arthritis involving the bony structures of the joints and resulting in a simple chronic osteitis of the affected joint, as for example cases of the character that I have above classified under the third group. Second, by causing in tuberculous subjects a general weakening of the constitution, and as a secondary and subsequent result the development of tuberculosis of the joints. If the first condition be present, that is to say a chronic osteitis following such a complicating polyarthritis as is under discussion, the history will show the manifest etiological connection between the acute infectious disease and the joint affection. But to ascribe a tubercular osteitis to the previous occurrence of an acute infectious disease, the latter having preceded the beginning of the osteitis months and years, is in itself unwarranted. We would not generally account for a pulmonary phthisis by the occurrence of an attack of scarlet fever months previous unless we could prove a connection between a complicating pulmonary affection at the time of the scarlet fever and the phthisis. How much less likely is it that chronic tubercular osteitis can possibly depend for its development upon the deterioration produced by an acute infectious disease from which complete recovery had taken place. Indeed, experimentally upon animals, it is one of the most difficult things to produce tubercular osteitis, even when tubercular matter is injected directly into the circulation. In a series of seven guinea pigs in which I injected pus which had been carefully aspirated from tubercular joints of patients, I find that while the guinea pigs are developing general tuberculosis, as shown by enlarged glands, etc., there is no evidence of disease of the hip joint. In all of these animals the tubercular pus was injected into the thigh as near the hip joint as possible. Other experimenters have found that even when animals have been thus injected with tubercle bacilli and tuberculous matter and have had the joints injured and the bones fractured, it was very difficult to set up a tubercular osteitis or osteomyelitis. It occurred only in a minority of the cases, most of them healing from the effects of the traumatism in the same manner as healthy animals. How much less probable is it therefore that the general lowering of the vital energies, such as that which results from the effects of an acute disease, would have very much influence in the production of a specific tubercular inflammation of the bony structures, especially a long time after recovery from the acute disease had taken place. As well might malaria, pneumonia, nephritis or every other acute affection be put down as direct etiological factors in the production of chronic tubercular osteitis. So that when an eminent writer on orthopedic surgery claims that 16 per cent. of the cases result from some previous attack of an acute infectious disease, I feel that here is an instance of the common post hoc, propter hoc fallacy. Unless chronic osteitis can be traced as having resulted from an arthritis directly complicating an acute infectious disease, most frequently scarlet fever and measles, I do not consider that any etiological connection should be affirmed between the acute malady and the subsequent occurrence of chronic joint disease.

Prognosis.—I have already stated that the ordinary prognosis of polyarthritis complicating scarlet fever is good. By far the largest proportion of cases are of the first and second variety, which I have described, and these terminate in recovery. The fourth variety, in which the arthritic process is from its inception a purulent one, accompanied by a general condition of septicaemia, is almost uniformly fatal. I have seen several cases of this form of polyarthritis not complicating scarlet fever, but puerperal septicaemia. In these cases not only the joint ends of the bones undergo suppuration, but the whole shaft of the bones may become involved in a purulent osteomyelitis. The prognosis of the third class of cases is more interesting. In these cases there is general arthritis, involving all of the structures of the joint, with or without the formation of pus; these cases may terminate in recovery, or in chronic joint disease; as a rule, not all of the joints affected in any case go on to have chronic joint disease, but generally most of the affected joints recover, with the exception of one which goes on to suppurative joint disease, with the usual prognosis of this affection. It goes without saying that cases of polyarthritis complicating scarlet fever may terminate fatally from causes not connected with the joint complication. Thus, a scarlatinous nephritis may cause a fatal termination in a case in which polyarthritis was an incident, but death is very rarely, indeed, due to the arthritis *per se*, and my experience has not shown that the occurrence of polyarthritis as a complication of scarlet fever is in itself a sign of any severe sepsis, except in the cases of the fourth class, to which I have alluded.

Treatment.—Remembering the causation of this complication of scarlet fever, much can be done from a prophylactic standpoint. These joint inflammations being caused by mixed infection, the problem of preventive therapeutics is to prevent the absorption into the circulation of the streptococci and staphylococci and other organisms which are the active cause of the joint inflammations. The point of entry into the body in cases of scarlet fever is evidently through the mucous membranes of the throat and nose. The inflamed lesions of these mucous membranes form the best possible condition under which these germs can be absorbed into the circulation. These germs are omnipresent even in healthy throats; they are present in larger numbers in throats which are the seat of a pseudo-diphtheria, and together with Loefler bacilli are present in throats affected by true diphtheria.

It is logical to suppose that any form of treatment which will diminish the numbers of these germs in the throats of scarlet fever patients will diminish the danger of mixed infection, and thus prevent complications, and, amongst others, these joint affections. Scarlet fever throats should be irrigated, whether true diphtheria be present or not. And, in view of the fact that streptococci are destroyed by comparatively weak antiseptic solutions, it is possible to use such weak solutions of corrosive sublimate and boracic acid that the throats can be thoroughly irrigated and yet no deleterious effects follow the use of the antiseptic. Corrosive sublimate solution of the strength of 1-4000 can be used for irrigating with the fountain syringe three times in 24 hours. Should the condition of the throat require it, however, these irrigations can be made far more frequently. My conviction of the much greater number of these cases in hospital, as compared with private practice, together with other factors, leads me to suspect that the element of contagion may have some influence in the production of this complication. It, therefore, seems advisable that where several cases of scarlet fever occur in one family they should be isolated from each other, while in hospitals as much air space should be given to each patient as the circumstances of the institution will permit. Certainly, cases of scarlet fever in which complications are present should not be placed next to cases running a benign and simple course.

As to active therapeutics of a medicinal nature, the indications are to allay pain, and specifically to influence the disease. For the alleviation of pain we have used at the hospital phenacetine. This drug seems to relieve these pains without depressing the heart. In addition, opium and other narcotics and anodynes can be used. Ice bags applied to the inflamed joints are certainly of much benefit in relieving pain and reducing the severity of the inflammation. Most of the medicinal therapeutics have been of the anti-rheumatic group of drugs. These have been used on the basis that the affection was a form of rheumatism. I do not believe, in the light of the cases that I have seen, that there is any identity between the poison of rheumatism and this form of arthritis, but formerly I used both in hospital and private practice the various drugs which are so efficacious in acute articular rheumatism.

The drugs I then advised have been the salicylates, the alkalies, salol, piperazine, etc. None of these seem to have any specific influence over this complication. I have come reluctantly to the conclusion that while drugs are valuable in this complication to relieve pain, etc., we must look for no specific action from the anti-rheumatic remedies. The most rational remedy which can be expected in this disease will be the use of the anti-streptococcus serum, or streptococcus antitoxin. Marmorek, of Paris, especially has been using this serum in scarlet fever, and has succeeded in diminishing the complications materially. When the bacteriological department of the Health Board of New York City has succeeded in manufacturing a serum of sufficient strength, we shall be enabled to use what ought to be the most valuable as well as the most rational remedy for this complication. But this complication of scarlet fever, owing to its location, requires for its treatment more of surgery than of medicine. For, while mild cases will pass off readily with rest, counter irritation to the joint, and symptomatic treatment, cases of the second and third variety will require careful management.

In cases of the second class, so sensitive are these joints that the slightest movement produces agony, and it is often necessary to devise a splint which will give the joint absolute rest. This splint should be applied to the position of the joint most comfortable to the patient, without any attempt to rectify the deformity. As the acute process subsides, the splint should be modified to suit the modified position of the limb. When all pain,tenderness and swelling have disappeared, some of these joints are left in a condition of more or less complete fibrous anchylosis. Motion may be extremely limited or only slightly inhibited. At this stage, passive motion over an increasing arc from day to day is requisite in order to restore the function of the affected joint. I do not think that the breaking up of the adhesion under anæsthesia is advisable. In our cases passive motion without an anæsthetic was all that was necessary.

In joints in which the effusion is very great and persists for a very long time there is always the temptation to aspirate or incise and drain the joint. I do not think that a serous effusion in these cases, however long it persists, should ever be disturbed. It is almost invariably reabsorbed, and the joint recovers absolutely. Where we suspect pus the suspicion should be made a certainty by the aspirator, and, when found, the joint should be incised under antiseptic precautions, thoroughly washed out and drained. For this purpose a drainage tube of large calibre should be used, and care be taken that it really drains the joint in the position in which the patient lies. The early detection of pus in such a joint and immediate incision will generally prevent the occurrence of a chronic osteitis, or perhaps total destruction of the joint. When chronic osteitis results either from purulent synovitis or when the process in the joint is from its very inception an osteitis, which later on becomes chronic, the question of the proper treatment becomes a purely surgical one, parallel to similar cases of tubercular osteitis. Conservative treatment by extension, etc., or active surgical treatment depending upon the necessities of each individual case is indicated. Those cases of purulent polyarthritis which I placed in

the fourth group are of such a fatal character, and the general septicaemia kills so rapidly, that even surgical measures of an operative character, when performed, give only temporary relief by giving exit to large purulent effusions, but do not in any way inhibit the course of the pyaemia, or retard the fatal result.

I have thus in this paper sought to call attention to the salient points of an interesting complication of scarlet fever, the importance of which, from a diagnostic and therapeutic standpoint, have impressed me in my observation of these cases. I have also sought to show as far as may be in a clinical paper that the complication has no identity with rheumatic arthritis, and furthermore believe that the acute infectious diseases are much less frequently a causative factor in chronic joint diseases than is generally believed.

DISCUSSION.

Dr. Newton M. Schaffer said that he had long been deeply interested in the question of the relationship of acute infectious diseases to chronic joint disease, and his studies in this direction had led him to conclude that a direct connection between the two could only rarely be traced. The acute infectious diseases were more likely to result in acute joint lesions. Their effect on some cases of long standing joint disease was at times very curious. Sinuses that had long remained open would, on the invasion of scarlet fever, for example, quickly close, and the whole aspect of the chronic joint disease would assume a much better appearance.

Dr. J. Winters Brannan said that for some years past he had been especially interested in the relationship between endocarditis and scarlet fever. He cited one case, that of a child in a family in which three were sick with scarlet fever, who developed an arthritis and also chorea, together with a mitral regurgitation. The joint pains and accompanying febrile movement had been held in check by the salicylates, and the choreic movements had been controlled by the usual treatment for chorea. Out of seventeen cases of scarlet fever now in the Willard Parker Hospital there were three cases of arthritis, all mild, and two of these had a distinct cardiac murmur. From the close relationship between endocarditis and scarlet fever, and from the prompt relief to the joint pains in the complicating arthritis, he had been led to believe that this arthritis was essentially rheumatic.

Dr. Alexander Lambert alluded to the bacteriology of this subject, which he said was far from being in a satisfactory state.

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"Consumptive Bowels" in Children.—Writing to the *British Medical Journal* on this subject, Dr. Hobson says that food has less to do with tuberculous infection than is generally supposed. Out of 70 children under five years old who died with more or less generalized tuberculosis at Guy's Hospital in ten years, in only 28 could the intestines or their glands have by any possibility been the primary seats, and in many of these other parts appeared jointly responsible for systemic infection. These 28 cases constituted barely 11.4 per cent. of the total cases of systemic infection of all ages during the same period, and of course a very much smaller percentage of the total cases of tuberculous disease. He would say that about 5 per cent. of all medical cases were under five years of age at Guy's. On further analyzing his notes, however, he finds that of 21 children under two years of age, 9 showed tubercle in the intestine or mesenteric glands which could not have come to them by way of the lungs, for in no case were any tuberculous masses breaking down. Yet in only 1 of the 21 cases were the lesions such as were at all likely to have given recognizable symptoms during life. In 12 cases the primary seats were elsewhere. The age period of ten to twenty appears to furnish a larger proportion of abdominal to other tuberculosis than any other, for of 35 cases 16 came under that category. Out of a total of 246 of all ages, 70, or 28.4 per cent, were possibly abdominal in their origin. While no one can deny the great relative preponderance of abdominal tuberculous affection under five years of age, he for one does not admit that great preponderance which is assumed. Still less does he admit that this is a matter of feeding. For (1) the children of the people who seek hospital accommodation get very little milk, and (2) dirt swallowing is a potent factor which must not be overlooked. All little children, especially the poor, swallow much dirt. From the mouth, nose and upper pharynx tuberculous organisms may find their way to cervical glands, as, it is true, may be also the case with food-remains in the mouth; or be carried down to the stomach when its secretion is alkaline, and thence travel safely to the intestines and glands. He thinks we must look not to food but to a greater vulnerability in the infantile alimentary tract for its greater proneness to tubercle.—*Med. Rec., 1896, xlix, 230.*

Sterilization of Instruments.—A heaping tablespoonful of washing soda to a quart of water is the proper proportion for the solution in which instruments should be boiled for sterilization. *Do not* boil non-metallic sutures in this liquid, for it will very greatly weaken them. *Do not* boil an aluminum instrument in this liquid, for it will be corroded and completely ruined. Silk sutures and aluminum instruments may be sterilized by boiling in five per cent carbolic.—*Intern. J. of Surg., 1896, ix, 143.*

CASEOUS MEDIASTINAL GLANDS—SOME SYMPTOMS AND RESULTS.

By J. M. Beattie (M. A.), M. B. C. M., (Edin.).
Resident Surgeon Royal Alexandra Hospital for Sick Children, Brighton.

E. G. aet. 6 mos., was admitted to the Children's Hospital on 20th January, 1896, on account of very marked dyspnœa. The child had had this more or less for three months. At various times there were severe spasmodic attacks, during which the child became very cyanosed. No history of convulsions. No illness of any kind previously. The child had been nourished entirely on the breast. The father and mother were strong, healthy people. There was no history of tubercle in the family ; and so far as was known the child had not been in contact with any one suffering from tuberculosis. No rickets. *On admission :* Child was well nourished and very bright. There was marked *expiratory* dyspnœa—the inspiration was quite natural, but expiration very much prolonged and whistling in character.

There was marked indrawing of the lower ribs and upper part of the abdomen during expiration. No recession of intercostal spaces. There was slight general bronchitis. In the right supraclavicular region there was one enlarged gland anterior to the sterno mastoid. The abdomen was distended. Otherwise nothing abnormal could be detected. The temperature was 98.8 F.

January 21st, condition was practically unaltered—except that once child had a severe spasmodic attack. Came on suddenly and without any apparent cause. Child became very cyanosed—and for a second or two actually ceased breathing. During the day there was slight difficulty in swallowing.

There was no change in condition till 24th January, when child had a very severe spasmodic attack, and almost at once stopped breathing. There was very marked cyanosis, the eyeballs were rolled upwards and fixed, the eyelids closed. Conjunctivæ were non-sensitive. There was no pulse perceptible at the wrist. Artificial respiration and injections of ether and brandy were at once given and in about 2½ minutes from the cessation of respiration child gave one short gasp, then a slight interval, then one or two more gasps, and in from 6 to 8 minutes the breathing had resumed its ordinary state—the cyanosis had disappeared and the pulse was fairly good. There were no convulsive movements. Between 24th January and 28th January there were seven attacks similar to that

described. Except that the child was emaciating there was no change since admission.

January 28th, had another spasmodic attack, but this time there was in addition rigidity of the limbs, clenching of the hands and a tendency to opisthotonos.

January 29th, another attack similar to above. On the evening of this day the child was very restless, face flushed. Temperature had risen to 104. There was a considerable increase in the bronchial catarrh.

January 30th, temperature was again normal, and child appeared to be better.

February 1st, temperature again rose to 103.2, and there were now signs of pneumonia. There was rather severe diarrhoea and the head was retracted. There was no rigidity of the cervical muscles. Breathing was much easier when head was well back. When head was pushed forward dyspnœa became more marked and child became cyanosed. The pneumonia increased, and child got gradually more feeble. The dyspnœa was not nearly so marked, and there were now no spasmodic attacks. The temperature was very irregular, the average was about 103, but it varied, on one occasion being as low as 99, whereas at the end it was 105, 106, 107. The case now presented no special features. It was now simply a severe pneumonia and on the 19th of February the child died, temperature being 107.4 F.

Post mortem : The subtracheal glands, and the other glands in this region were enlarged and caseous. One gland on the left side of the trachea just above the left bronchus was about the size of a walnut. It was causing pressure in this region and had ulcerated through the trachea, discharging its caseous material into that tube just at the bifurcation. There was pneumonic consolidation of the lower lobes of both lungs. The mesenteric glands were also enlarged and some of them were caseous. The larynx and pharynx were perfectly normal. The brain was œdematous but otherwise normal.

Remarks: The case presents several points of interest. The usual teaching is that in tracheal obstruction there is *inspiratory* dyspnœa, the head is thrown forward and the chin depressed, and that there is noisy stridor. In the above case the dyspnœa was purely *expiratory*, the head was thrown very far back ; and seldom was there any stridor. When present the stridor was very slight.

The situation of the pressure on, and later the perforation into, the trachea seems to me to explain why the dyspnœa was expiratory, and why th expiration was prolonged and noisy. The right bronchus

was perfectly patent, and therefore the inspired air passed mainly to the right lung. The elastic recoil of the lungs was continually going on, and consequently air from the left lung was pressed out and this through a narrow channel into a wider one. Here then we had the physical conditions necessary to produce prolonged and noisy breathing and they came into play only during the expiratory phase.

However, I wish particularly to refer to the spasmodic attacks. Various explanations may be put forward. The milder early attacks were probably due in part to acute swelling of the mucous membrane at the seat of pressure, and in part to spasm of the muscular tissue of the trachea itself, as mentioned by Dr. Bristowe in the third volume of the "St. Thomas' Hospital Reports."

The more severe attacks seem more likely to have been due either to an actual blockage of the air tubes by some of the caseous material discharged from the gland ; or to have been reflex, due to the irritation caused by the discharged material. As reasons for this view I would mention the sudden onset—the short time the actual stoppage of respiration lasted, and the rapid return of the breathing to the condition it was before the attack. It seems to me very probable that the artificial respiration caused the foreign body to be moved onwards and perhaps broken up and thus relieved the urgent symptoms.

The gland had not discharged the whole of its caseous material. Why then should the spasmodic attacks have ceased ? It might be said that this was due to a paresis of the nerve endings at the seat of obstruction by the constant irritation, or by the inflammation which was so marked. This may be in part the explanation, but there seems to me to be a simpler and more satisfactory one. The attacks ceased with the onset of head retraction. This retraction would cause elongation of the trachea. The gland which had caused the perforation was adherent to the trachea but not to the vertebral column—whereas the glands in the bifurcation were adherent to both trachea and vertebræ. The trachea was thus fixed at practically the seat of perforation. When the head was retracted the trachea was put on the stretch and the lateral gland was moved a certain distance from the actual aperture ; which at the same time was narrowed and elongated. By experiment I found that when the trachea was relaxed the caseous material could quite easily be squeezed into the tube—whereas with the trachea elongated this could not be done.

I take it, therefore, that the retraction was a purely voluntary action on the part of the child.

As the result of this caseous material getting into the bronchi we no doubt had the pneumonia which was the cause of death.

The only other point I would call attention to is—what was the source of the tuberculous infection? The child was entirely fed from the breast of a healthy mother. A careful inquiry into the family history revealed no trace of tubercle. The disease was farther advanced in the bronchial than in the mesenteric glands. All seems therefore to point to a case of direct infection through the air passages, from a source which must remain unknown.

To Dr. Wayland C. Chaffey, under whose care the child was, I am indebted for permission to publish the case, and also for the notes of the post mortem examination.

TUBERCLE (?) IN THE LEFT SIDE OF PONS.

By JOSEPH COLLINS, M. D.,
Visiting Neurologist to City Hospital, New York.

THE following history points with such exactitude to a localized lesion in the pons, and the occurrence of the disease with its course are so suggestive of the nature of the lesion, that the relation of it cannot but be instructive.

The little girl, four years old, is a native of this country, born of Irish parentage. The father and mother are apparently healthy, as are two other children. A paternal uncle died of tuberculosis. This little patient was well until she was seven months old, when she suffered from a severe attack of diphtheria. After recovery from the diphtheria she had convulsions on several occasions. When she was upward of a year old an attack of pertussis laid her low for several weeks, and since then she has not been rugged.

Six months ago she had bronchial pneumonia, from which she apparently made a fairly good recovery, but she has never since been well.

Her present symptoms date back two months (December 26, 1895). The parents say that they first noticed a white speck in the left eye, a phlyctænula in all probability, as a small scar can now be seen, and with this there was drooping of the left lid, which really means she could not close the left lid. Two weeks later it was noticed that the eyes were turned toward the right side. This condition, the father says, had increased considerably in the few days before I saw her, although we may here remark that it remained *in statu quo ante* while under observation. After her present illness

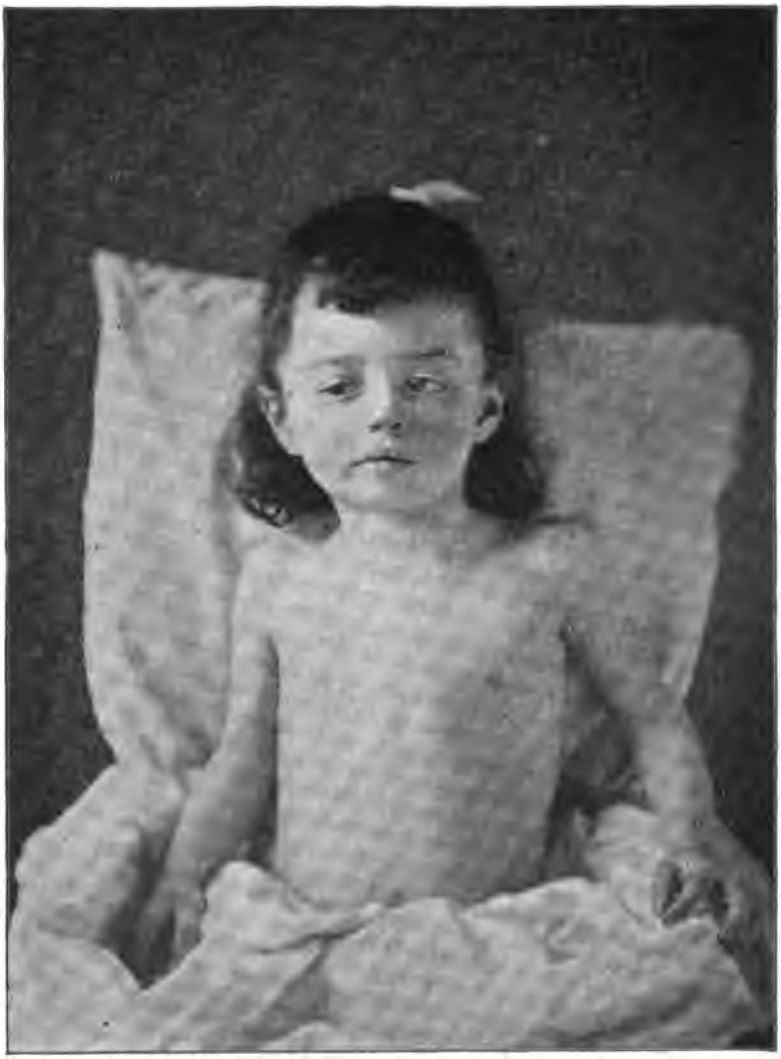

FIG. 1. Tubercle (?) in Left Side of Pons. Face in Repose.

attack of scarlet fever months previous unless we could prove a connection between a complicating pulmonary affection at the time of the scarlet fever and the phthisis. How much less likely is it that chronic tubercular osteitis can possibly depend for its development upon the deterioration produced by an acute infectious disease from which complete recovery had taken place. Indeed, experimentally upon animals, it is one of the most difficult things to produce tubercular osteitis, even when tubercular matter is injected directly into the circulation. In a series of seven guinea pigs in which I injected pus which had been carefully aspirated from tubercular joints of patients, I find that while the guinea pigs are developing general tuberculosis, as shown by enlarged glands, etc., there is no evidence of disease of the hip joint. In all of these animals the tubercular pus was injected into the thigh as near the hip joint as possible. Other experimenters have found that even when animals have been thus injected with tubercle bacilli and tuberculous matter and have had the joints injured and the bones fractured, it was very difficult to set up a tubercular osteitis or osteomyelitis. It occurred only in a minority of the cases, most of them healing from the effects of the traumatism in the same manner as healthy animals. How much less probable is it therefore that the general lowering of the vital energies, such as that which results from the effects of an acute disease, would have very much influence in the production of a specific tubercular inflammation of the bony structures, especially a long time after recovery from the acute disease had taken place. As well might malaria, pneumonia, nephritis or every other acute affection be put down as direct etiological factors in the production of chronic tubercular osteitis. So that when an eminent writer on orthopedic surgery claims that 16 per cent. of the cases result from some previous attack of an acute infectious disease, I feel that here is an instance of the common post hoc, propter hoc fallacy. Unless chronic osteitis can be traced as having resulted from an arthritis directly complicating an acute infectious disease, most frequently scarlet fever and measles, I do not consider that any etiological connection should be affirmed between the acute malady and the subsequent occurrence of chronic joint disease.

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It is logical to suppose that any form of treatment which will diminish the numbers of these germs in the throats of scarlet fever patients will diminish the danger of mixed infection, and thus prevent complications, and, amongst others, these joint affections. Scarlet fever throats should be irrigated, whether true diphtheria be present or not. And, in view of the fact that streptococci are destroyed by comparatively weak antiseptic solutions, it is possible to use such weak solutions of corrosive sublimate and boracic acid that the throats can be thoroughly irrigated and yet no deleterious effects follow the use of the antiseptic. Corrosive sublimate solution of the strength of 1-4000 can be used for irrigating with the fountain syringe three times in 24 hours. Should the condition of the throat require it, however, these irrigations can be made far more frequently. My conviction of the much greater number of these cases in hospital, as compared with private practice, together with other factors, leads me to suspect that the element of contagion may have some influence in the production of this complication. It, therefore, seems advisable that where several cases of scarlet fever occur in one family they should be isolated from each other, while in hospitals as much air space should be given to each patient as the circumstances of the institution will permit. Certainly, cases of scarlet fever in which complications are present should not be placed next to cases running a benign and simple course.

As to active therapeutics of a medicinal nature, the indications are to allay pain, and specifically to influence the disease. For the alleviation of pain we have used at the hospital phenacetine. This drug seems to relieve these pains without depressing the heart. In addition, opium and other narcotics and anodynes can be used. Ice bags applied to the inflamed joints are certainly of much benefit in relieving pain and reducing the severity of the inflammation. Most of the medicinal therapeutics have been of the anti-rheumatic group of drugs. These have been used on the basis that the affection was a form of rheumatism. I do not believe, in the light of the cases that I have seen, that there is any identity between the poison of rheumatism and this form of arthritis, but formerly I used both in hospital and private practice the various drugs which are so efficacious in acute articular rheumatism.

The drugs I then advised have been the salicylates, the alkalies, salol, piperazine, etc. None of these seem to have any specific influence over this complication. I have come reluctantly to the conclusion that while drugs are valuable in this complication to relieve pain, etc., we must look for no specific action from the anti-rheumatic remedies. The most rational remedy which can be expected in this disease will be the use of the anti-streptococcus serum, or streptococcus antitoxin. Marmorek, of Paris, especially has been using this serum in scarlet fever, and has succeeded in diminishing the complications materially. When the bacteriological department of the Health Board of New York City has succeeded in manufacturing a serum of sufficient strength, we shall be enabled to use what ought to be the most valuable as well as the most rational remedy for this complication. But this complication of scarlet fever, owing to its location, requires for its treatment more of surgery than of medicine. For, while mild cases will pass off readily with rest, counter irritation to the joint, and symptomatic treatment, cases of the second and third variety will require careful management.

In cases of the second class, so sensitive are these joints that the slightest movement produces agony, and it is often necessary to devise a splint which will give the joint absolute rest. This splint should be applied to the position of the joint most comfortable to the patient, without any attempt to rectify the deformity. As the acute process subsides, the splint should be modified to suit the modified position of the limb. When all pain,tenderness and swelling have disappeared, some of these joints are left in a condition of more or less complete fibrous anchylosis. Motion may be extremely limited or only slightly inhibited. At this stage, passive motion over an increasing arc from day to day is requisite in order to restore the function of the affected joint. I do not think that the breaking up of the adhesion under anæsthesia is advisable. In our cases passive motion without an anæsthetic was all that was necessary.

In joints in which the effusion is very great and persists for a very long time there is always the temptation to aspirate or incise and drain the joint. I do not think that a serous effusion in these cases, however long it persists, should ever be disturbed. It is almost invariably reabsorbed, and the joint recovers absolutely. Where we suspect pus the suspicion should be made a certainty by the aspirator, and, when found, the joint should be incised under antiseptic precautions, thoroughly washed out and drained. For this purpose a drainage tube of large calibre should be used, and care be taken that it really drains the joint in the position in which the patient lies. The early detection of pus in such a joint and immediate incision will generally prevent the occurrence of a chronic osteitis, or perhaps total destruction of the joint. When chronic osteitis results either from purulent synovitis or when the process in the joint is from its very inception an osteitis, which later on becomes chronic, the question of the proper treatment becomes a purely surgical one, parallel to similar cases of tubercular osteitis. Conservative treatment by extension, etc., or active surgical treatment depending upon the necessities of each individual case is indicated. Those cases of purulent polyarthritis which I placed in

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After reviewing the various opinions which have from time to time prevailed as to the proper nourishment of the infant and the proper way to prepare its food, the speaker said a new impetus had been given the subject by the recent establishment in this country of milk laboratories, which stand in the same relation to the dietetist that a well equipped pharmacy bears to the therapeutist. The elements of guess work and expecting all infants to do equally well on one and the same preparation has been done away with. As physicians have changed their views about the best methods of preparing the milk for infant consumption, there has always come the echo from the past saying, "I told you so." You now treat it chemically, "I added soda or lime water years ago," or, if you now sterilize it, "I boiled it long ago." Now, however, the system introduced by Dr. Rotch, of Boston, and carried out by the Walker-Gordon Laboratory, offers a scientific way of meeting the requirements of the varying cases and conditions :

The next paper was entitled :

Diagnosis in Diseases of Children, and read by Dr. C. G. Slagle, of Minneapolis, Minn. To be a thorough diagnostitian in pediatrics one must be a specialist in all departments, consequently pediatrics can never become a strict specialty. To practice among children one must be a general practitioner, well up in all branches of medicine, and something more added.

Diagnosis is the most important of all we can learn, and is the test by which we measure a man's skill and knowledge. It must not be thought, as some have claimed, that accuracy in diagnosis is not necessary in children's diseases. One who can correctly diagnosticate three out of every four cases presenting themselves for treatment is to be regarded as a fairly good diagnostitian. Much credit for the standing of pediatrics to-day was given to American workers, and a number of New York physicians were specially mentioned as having contributed largely to the standing of the American specialist in this field. In discussing this paper,

DR. LARRABEE, of Louisville, said that in the education of young men we could not lay too great stress upon the importance of diagnosis. Its study is augmented in interest by a concomitant study of diathetic states which so influence many diseases in early life. Inheritance will make its influence felt and we must be ever on the watch for it. Its bearing upon diagnosis was most important. All examinations of infants, to be most instructive should be made in the unclothed state of the body. Inspection points out by some sign the way in which the further examination should lead. Watch the infant as it lies at rest, the facies, the respiration, the use of the limbs, its appearance or its actions, and you will obtain a hint as to the organ or part involved.

DR. WOODY, of Louisville, Ky., said that tact and patience can alone make up for the aids which the adult is able to give the physician. He did not agree that examination of the chest was more difficult in infancy, but on the contrary had found that, by reason of the very thinness of the chest walls and tissues, the sounds were much more readily made out. He preferred to make his chest examinations while the infant slept.

The next paper was by DR. JOHN LARRABEE, of Louisville, Ky., and was entitled "Pediatric Therapeutics as Proven by Experience." It will be published exclusively in an an early issue of PEDIATRICS. In the discussion,

DR. TULEY, of Louisville, Ky., said that a mistake was often made when antitoxin was used by neglecting local measures. They were as necessary and useful at this time as when solely relied upon. When emetics are given, stomach washings should supplement them.

DR. SLAGLES thought that syrups in general should be given up in infantile therapeutics. He could not agree that turpeth mineral was an emetic to be relied upon for habitual employment. It was far too irritating and dangerous, and he would advise its use only as a last resort in membraneous croup.

DR. LOVE, of St. Louis, said that while too little attention had been as a rule paid to infantile therapeutics, too many drugs were used. We owe much to the abused hydropath for what he had taught us of the value of water. If to-day he should be given a choice of two remedies with which to combat children's diseases, he would unhesitatingly name water and calomel. The adult can overload the stomach with water and then expel it of his own effort, the infant must have lavage practiced to accomplish the same purpose. He agreed that turpeth mineral was a most valuable emetic in laryngeal stenosis. As to opium, he would withdraw it entirely from the list of useful drugs for children. He believed that most cases of reported diphtheria recently treated by antitoxin have been in reality instances of follicular tonsilitis. Still, the method he believed a good one, but to be of value it must be applied early. Conservatism at the bedside of the baby is, after all, the most important thing for us to acquire and practice.

DR. KLEBS, of Munich, Germany, said he would reserve most of his remarks for the discussion upon antitoxin. He agreed with the views advanced by the reader of the paper as to the great importance of conservatism in treating children.

DR. ELMER LEE, of Chicago, read a paper upon **The Fallacy of Anti-Toxin as a Cure for Diphtheria.**—The process of serum production in the laboratory was first described, and the fallacies which surround the injection of lymph for the cure of rabies were pointed out as a suggestive introduction to those fallacies which one encounters in treating diphtheria in the same way. The speaker then compared the two clinical varieties of diphtheria. The system is struggling against a poison which is overcoming it, and, strangely enough, we are expected to add a substance which has no place in the economy, a product of the bacterial laboratory—a poison which may prove the last straw. It is unphysiological and dangerous. There is to-day no record or valid reason to encourage hope for better results than we have had in the past from other methods. The system does not need to be further poisoned to enable it to expel the morbid matters already present. Poison of any kind in the system cannot be successfully combatted by the addition of a similar poison by injecting the latter into the blood. The promises which have been held out of the benefits to accrue to diphtheritic patients have not been substantiated. Statistics show the method to be ineffectual, and those of the Willard-Parker Hospital show it to be dangerous. Large numbers of cases reported have been of the bacteriological variety.

It was predicted that within a year many would lay aside this newer method and return to the older and less dangerous methods of treatment. Straws are not wanting at the present time to indicate which way the wind blows.

DR. JOSEPH W. STICKLER, of Orange, N. J., presented a paper upon his **Experience with Antitoxin, with Instructive Results.**—He had used the serum treatment in a number of instances; one, in which the membrane could be shown in the larynx, presented marked signs of progressive depression. After the first injection improvement began, and at the end of a week the patient was well. In a second instance the system was more profoundly affected and the depression was very marked. In spite of the antitoxin the patient died on the following day. In this class of cases the speaker thought the serum was of no avail. It should be used only in those cases where it can be injected in an early stage of the disease.

DR. LOUIS FISHER, of New York, presented a paper upon **Some Practical Points on the Effects of Antitoxin and Intubation, with Special Reference to Infant Feeding in Malignant Diphtheria.**—Since there exists a danger of injecting air into the vein if injections are made where the latter are large, only those parts should be chosen where the veins are less numerous and small. In cases of severe stenosis intubation should be made use of to prevent asphyxiation.

Whatever remedies are given should be administered, as much as possible, hypodermatically. Enemata of water and plenty of water by the mouth are advised to aid in reducing temperature. Marked decrease in the number of respirations is indicative of improvement. Disappearance of albumin from the urine is also a sign of decided improvement. The discussion of these papers was opened by Dr. Edward Klebs. He said that if he had understood aright, Dr. Lee had taken the ground that the bacilli were not proven to be the cause of diphtheria. From classical experience alone he thought we might at the present day admit the infectiousness of the disease. To be sure, bacilli are often found in the throats and upon other mucous membranes of persons in perfect health. In such instances the bacilli present are only exerting their non-poisonous effects. This is a common observation with many different microorganisms, that they may be harmless unless called into activity by some change in their surroundings. It is a common observation that children are taken sick with diphtheria just after they have contracted a cold. In these instances the organism was previously present, but exerted

described. Except that the child was emaciating there was no change since admission.

January 28th, had another spasmodic attack, but this time there was in addition rigidity of the limbs, clenching of the hands and a tendency to opisthotonos.

January 29th, another attack similar to above. On the evening of this day the child was very restless, face flushed. Temperature had risen to 104. There was a considerable increase in the bronchial catarrh.

January 30th, temperature was again normal, and child appeared to be better.

February 1st, temperature again rose to 103.2, and there were now signs of pneumonia. There was rather severe diarrhoea and the head was retracted. There was no rigidity of the cervical muscles. Breathing was much easier when head was well back. When head was pushed forward dyspnœa became more marked and child became cyanosed. The pneumonia increased, and child got gradually more feeble. The dyspnœa was not nearly so marked, and there were now no spasmodic attacks. The temperature was very irregular, the average was about 103, but it varied, on one occasion being as low as 99, whereas at the end it was 105, 106, 107. The case now presented no special features. It was now simply a severe pneumonia and on the 19th of February the child died, temperature being 107.4 F.

Post mortem : The subtracheal glands, and the other glands in this region were enlarged and caseous. One gland on the left side of the trachea just above the left bronchus was about the size of a walnut. It was causing pressure in this region and had ulcerated through the trachea, discharging its caseous material into that tube just at the bifurcation. There was pneumonic consolidation of the lower lobes of both lungs. The mesenteric glands were also enlarged and some of them were caseous. The larynx and pharynx were perfectly normal. The brain was œdematous but otherwise normal.

Remarks: The case presents several points of interest. The usual teaching is that in tracheal obstruction there is *inspiratory* dyspnœa, the head is thrown forward and the chin depressed, and that there is noisy stridor. In the above case the dyspnœa was purely *expiratory*, the head was thrown very far back ; and seldom was there any stridor. When present the stridor was very slight.

The situation of the pressure on, and later the perforation into, the trachea seems to me to explain why the dyspnœa was expiratory, and why th expiration was prolonged and noisy. The right bronchus

was perfectly patent, and therefore the inspired air passed mainly to the right lung. The elastic recoil of the lungs was continually going on, and consequently air from the left lung was pressed out and this through a narrow channel into a wider one. Here then we had the physical conditions necessary to produce prolonged and noisy breathing and they came into play only during the expiratory phase.

However, I wish particularly to refer to the spasmodic attacks. Various explanations may be put forward. The milder early attacks were probably due in part to acute swelling of the mucous membrane at the seat of pressure, and in part to spasm of the muscular tissue of the trachea itself, as mentioned by Dr. Bristowe in the third volume of the "St. Thomas' Hospital Reports."

The more severe attacks seem more likely to have been due either to an actual blockage of the air tubes by some of the caseous material discharged from the gland ; or to have been reflex, due to the irritation caused by the discharged material. As reasons for this view I would mention the sudden onset—the short time the actual stoppage of respiration lasted, and the rapid return of the breathing to the condition it was before the attack. It seems to me very probable that the artificial respiration caused the foreign body to be moved onwards and perhaps broken up and thus relieved the urgent symptoms.

The gland had not discharged the whole of its caseous material. Why then should the spasmodic attacks have ceased ? It might be said that this was due to a paresis of the nerve endings at the seat of obstruction by the constant irritation, or by the inflammation which was so marked. This may be in part the explanation, but there seems to me to be a simpler and more satisfactory one. The attacks ceased with the onset of head retraction. This retraction would cause elongation of the trachea. The gland which had caused the perforation was adherent to the trachea but not to the vertebral column—whereas the glands in the bifurcation were adherent to both trachea and vertebræ. The trachea was thus fixed at practically the seat of perforation. When the head was retracted the trachea was put on the stretch and the lateral gland was moved a certain distance from the actual aperture ; which at the same time was narrowed and elongated. By experiment I found that when the trachea was relaxed the caseous material could quite easily be squeezed into the tube—whereas with the trachea elongated this could not be done.

I take it, therefore, that the retraction was a purely voluntary action on the part of the child.

presence of other toxines or ptomaines, which should not be present. Any bottle showing turbid deposit should be discarded. After administering antitoxin care should be taken to remove septic material from the throats of patients just as under any other form of treatment.

Dr. W. B. Parks, of Atlanta, said almost all the supposed diphtheria in Atlanta was in reality follicular tonsilitis. Antitoxin was therefore scarcely ever necessary.

Dr. Rosenthal, of Philadelphia, said that according to the latest investigations of Dr. Billings, of New York, the blood showed no alteration after the injections of antitoxin. Personally, he had not encountered abscess formation or indeed any bad effects from the antitoxin. He advised sealing over the site of infection with iodoform in collodion. If we have mixed infection, something besides antitoxin must be employed, since the latter possesses power over the Klebs-Loeffler bacillus alone. He had observed that since he had used antitoxin in stenosis cases, the intubation tube can be removed from the throat at a much earlier period than formerly.

Dr. Ross, of Indiana, said that in his home, Kahamo, about two hundred cases had been treated, fifty of them being in his own practice. Only one showed any signs of irritation, this patient developing an erythema. While not a case died of those injected, many cases, which did not receive the antitoxin, proved fatal.

Dr. Gray, of Connecticut, said that in Bridgeport he had seen about seventy cases treated. Twenty-eight were his own cases and, of this number, one only proved fatal. One to two thousand units as an initial dose gave better results than when the smaller doses were used.

Dr. Tomlinson, of Michigan, said that at the meeting of the association one year ago he had argued in favor of the method and it was very gratifying to him to hear so much now said in its favor. There is no more reason for withholding it because death had resulted than there would be to refuse the benefits offered by cocaine which had also its victims.

Dr. Bell, of Georgia, said there was no question from his observations that an antitoxic effect was produced. He had seen many cases treated in the New York Infant Asylum where the Klebs-Loeffler bacillus was found in healthy throats, he believed in using the serum for its immunizing effects.

Dr. Baker had failed to see any effects from antitoxin which could not be secured by other methods. He had seen one hundred and fifty cases treated at the Willard Parker Hospital in New York.

Two years more will be required to enable us to render final judgment.

Dr. Wilson, of Ohio, said his cases died until he began to use antitoxin ; then a series of sixty recovered under its use.

Dr. Knight, of Pennsylvania, did not accept the statement that diphtheria does not secure immunity to its possessor. He thought an attack of true diphtheria always did secure freedom from any subsequent attack.

Dr. Klebs said there were different forms of immunity. Recurrences do take place in diphtheria, but not with the same frequence as recurrences in pneumonia. Many of the children in a family where diphtheria exists will show bacilli in the nose and throat, and still without any immunizing dose of antitoxin they never develop the disease.

Dr. Lee, in closing the discussion on his paper, said the position he had taken he felt sure was right, since the serum treatment was not based upon strict scientific principles, but he was unable to offer a substitute for the method he would overthrow. He read extracts from a letter recently received from Dr. Winters, of New York, showing that the writer had failed to find the antitoxin treatment of value.

Infantile Scorbutus was the title of the next paper, read by Dr. Albert H. Burr, of Chicago, in which the increasing frequency of scurvy in childhood was commented upon, and the increased use of prepared infant foods was charged with being the cause. A clinical history was related in which urpuric spots going on to suppuration were seen upon the shoulders and other parts of the body. The exclusive food from birth had been Mellin's food. At the age of thirteen months the weight was but 13½ pounds, and the child could not raise its head from the pillow. Diet was changed to raw cow's milk, orange juice, scraped beef, etc. The gums soon lost their spongy condition, and in a week there was an increase of one pound weight. At the end of six weeks the child was well.

Modified cow's milk offers the nearest approach to the mother's milk. In rearing infants artificially, no continuous administration of any prepared food should be allowed to the exclusion of fresh elements of diet.

Observations in Cases of Epilepsy following Injuries to the Head in Infancy, Childhood and Early Youth, was the title of a paper by Dr. W. A. Dixon, of Ripley, Ohio. A number of clinical histories were given showing the connection between the injury and the outbreak of epileptic seizures. In one case trephining over the scar disclosed a cystic tumor as large as a medium-sized orange. This was removed and no further attacks were noted.

Dr. W. J. Bell, of Atlanta, Ga., presented two plaster casts taken from twin girls, fifteen months of age, showing very marked rachitic protrusion of the chest walls. The mother was a hunchback negro woman. Both children died within a few hours of each other of some disease of the lungs. The question was raised during the discussion whether congenital rachitis was now a recognized condition. The reader of the paper said it was so considered.

The same gentleman presented the next paper upon:

The Use of the Stomach and Rectal Tube in Children, describing his own method of washing out the child's stomach in fermentative diseases. The rectal tube is of more general utility. Irrigation of the bowels is frequently followed by a decided fall in the bodily temperature. To carry it out the child is placed on its left side with the head low and the hips raised. Various conditions, including dysentery and protracted gastro-enteritis, were found to be greatly benefited.

The next paper treated of:

Infantile Spinal Paralysis.—Its author, Dr. Mayer, of Chicago, did not present the paper in full. It consisted largely of clinical histories. He divided his cases into two classes, those of moderate and those of great severity. In the latter there is inability to walk. If the Faradic current will produce contraction of the affected muscles, it is to be used; if not, then the galvanic current should be used. Treatment must be long continued.

Dr. Manley thought improper use of forceps in delivery were the cause of much damage to the infant's head and might occasion epilepsy. If evidence of bone depression can be made out distinctly operation is indicated.

The Evolution of Girls was the subject of a paper by Dr. Harriet E. Garrison, of Dixon, Ill. The nerve supply governing animal function springs from the posterior portion of the brain. Faulty position of the infant in lying was blamed for compression of the brain and retardation of its development. Infants should be encouraged to creep, to toss about and assume ever-changing attitudes. It is a mistake to encourage girl babies to sit up and stand up too early. Later in life the bad effect of too much erect sitting in school and at home is felt. There is too little rest in the horizontal position. The hips should be raised. Girls should take part in all out-of-door exercise in which boys engage, even to military tactics and gymnastics.

DR. SLAGLE advocated bicycle exercise for girls.

DR. SMALL agreed and said the handle bars raised two inches higher than the seat would secure the proper erect pose.

DR. HIBERGER, of Washington, D. C., had found that girls who rode the wheel had less difficulty with their menstrual periods.

DR. COTTON, the Chairman, was unwilling to accept the view advanced in the paper that the anterior lobes of the brain could be developed by the position assumed in creeping, etc.

The next paper was by DR. SMALL, of Pittsburgh, Pa., on **Retention of Urine in the Newly Born.** The histories of three cases were related. In the first, the female urethra was occluded by inspissated mucus, preventing urination for seventy-two hours. A probe was passed and the urine flowed freely. The same condition was present in case two, which concerned a boy. The writer had devised a child's catheter of No. 9, French calibre, not having found such an instrument described in any catalogue. He had employed it successfully in a number of instances. The literature of retention in infancy is very scanty. Text-books are almost silent upon the subject. Of all the causes, that of inspissated mucus seems the most common.

DR. SLAGLE thought we should temporize for a long time before resorting to such an instrument. He had rarely had occasion to interfere except by mild means—enemata, baths, etc.

DR. BYERS thought the condition described must be very rare. He agreed with other speakers who had rarely seen retention, though engaged in active obstetric practice.

DR. GRAHAM said prolonged labor might result in temporary paresis of the bladder. He saw no reason for the curve in the catheter shown. At any rate there should be no angle.

DR. CUNNINGHAM related an instance of imperforate meatus in which circumcision had given no relief. Convulsions followed and it was not until a probe had been passed into the urethra that the urine passed and the convulsions ceased.

DR. C. W. ALLEN, of New York, thought the mere introduction of a probe without passing it to the bladder might by reflex action result in the passage of urine. An instance of congenital occlusion of a considerable portion of the anterior urethra was related, in which the speaker had performed a perineal section, when the infant was twenty-four hours old. Having allowed the urine to escape, he had bored through the penile portion of the urethra from behind, plied, in connection with measures taken to better the child's nutrition, she seemed to make slight improvement in her general condition. The local symptoms remained the same. The parents, however, became dissatisfied when it was found necessary to isolate her on account of whooping cough breaking out in the ward, and they took her away. The lesions in this case point unequivocally to the tegmental region of the pons involving the nuclei of the sixth and seventh nerves, or the nucleus of the sixth and the intra pontal root of the seventh as it arches over and through the nucleus of the sixth. That the lesion is in the left half of the pons is shown by the loss of movement of the eyeballs toward the left, as a lesion in this part of the pons that causes paralysis is always on the side toward which there is loss of movement of both eyes. To explain conjugate deviation it is necessary to state that the sixth nucleus acts on the opposite third nucleus and internal rectus through the pathway of the posterior horizontal fibres. The fact that the eyes cannot be brought out to the median line shows that the disease involves the nucleus of the left sixth nerve.

In the opinion of the writer, the nature of the lesion in this case is tuberculous alone, or possibly a mixed infection, tuberculous and syphilitic, although it is but fair to state that Dr. Dillon Brown, under whose care the child was in the hospital, inclined to believe that it was syphilitic. The following factors are advanced in support of the first contention: 1. The physical signs in the lungs, attended with marked febrile disturbance, and the fact that these followed a broncho-pneumonia. 2. The enlargement of the glands, particularly in the neck. 3. The age of the child and the slowly progressing course of the disease. 4. The limitation of the symptoms to definite nerves, indicating a definitely localized lesion in the pons. 4. The cutaneous scars. 5. The extreme rarity of acquired syphilis, and, moreover, manifesting itself with such pathological lesion at so tender an age. In favor of syphilis it was thought that the following gave evidence: 1. The fissuration and ulceration of the anus. 2. The cutaneous scars. 3. The general adenopathy. In the opinion of the writer, instead of these being inimical to first hypothesis, they are considered as direct evidence.

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Editorial.

THE BAD-EYE FACTORY.

UNDER the above suggestive title, DR. E. W. SCRIPTURE, of Yale University, describes, in a recent number of the *Outlook*, the effects of eye-strain in schools. He states that about one per cent. of myopic eyes are due to congenital defect, the remainder are "a gift—thoughtlessly and needlessly, but irrevocably—bestowed upon us by the school." In German village schools 1 to 2 per cent. of the pupils are myopic; in primary schools 7 per cent., in grammar schools 10, in colleges 20 to 26, and in universities 40 to 60 per cent. The percentage of myopia shows a steady increase in successive classes. In view of these and many other observed facts we conclude that myopia is oftenest produced "by work held too close to the eyes, during the early years of life, when the eyes are soft." Young children are forced to do work upon objects of such small size that they cannot be plainly seen without bringing the objects close to the eye. The kindergarten occupations of perforating, sewing, bead-stringing and drawing on cross-ruled paper are justly condemned by Dr. Scripture as injurious to the eyes of young children, and we might add to their nerves as well. In the older classes too fine print is responsible for much eye-strain. Investigation has shown that print should not fall below the following standard in order that the book may be held at the proper distance: Height of smallest "n," 1-16 inch; thickness of main line of "n," 1-100 inch; distance between letters, 1-32 inch; space between lines, 3-32 inch; length of line not over four inches. For children the print should be larger. It was found at Giessen that the abolishing of home exercises in writing was followed by a marked decrease in bad eyes. These facts are doubtless familiar to most of us, and are only brought forward here to remind those who are devoting their lives to the interests of childhood to keep steadily in view their function as teachers, and to exert their powerful influence in the direction of a better school hygiene, and thus to hasten the day when the price of an education will no longer be for so many a pair of dimmed eyes.

HENRY LING TAYLOR, M. D., New York.

Society Report.

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The next paper was entitled :

Diagnosis in Diseases of Children, and read by Dr. C. G. Slagle, of Minneapolis, Minn. To be a thorough diagnostitian in pediatrics one must be a specialist in all departments, consequently pediatrics can never become a strict specialty. To practice among children one must be a general practitioner, well up in all branches of medicine, and something more added.

Diagnosis is the most important of all we can learn, and is the test by which we measure a man's skill and knowledge. It must not be thought, as some have claimed, that accuracy in diagnosis is not necessary in children's diseases. One who can correctly diagnosticate three out of every four cases presenting themselves for treatment is to be regarded as a fairly good diagnostitian. Much credit for the standing of pediatrics to-day was given to American workers, and a number of New York physicians were specially mentioned as having contributed largely to the standing of the American specialist in this field. In discussing this paper,

DR. LARRABEE, of Louisville, said that in the education of young men we could not lay too great stress upon the importance of diagnosis. Its study is augmented in interest by a concomitant study of diathetic states which so influence many diseases in early life. Inheritance will make its influence felt and we must be ever on the watch for it. Its bearing upon diagnosis was most important. All examinations of infants, to be most instructive should be made in the unclothed state of the body. Inspection points out by some sign the way in which the further examination should lead. Watch the infant as it lies at rest, the facies, the respiration, the use of the limbs, its appearance or its actions, and you will obtain a hint as to the organ or part involved.

DR. WOODY, of Louisville, Ky., said that tact and patience can alone make up for the aids which the adult is able to give the physician. He did not agree that examination of the chest was more difficult in infancy, but on the contrary had found that, by reason of the very thinness of the chest walls and tissues, the sounds were much more readily made out. He preferred to make his chest examinations while the infant slept.

The next paper was by DR. JOHN LARRABEE, of Louisville, Ky., and was entitled "Pediatric Therapeutics as Proven by Experience." It will be published exclusively in an an early issue of PEDIATRICS. In the discussion,

DR. TULEY, of Louisville, Ky., said that a mistake was often made when antitoxin was used by neglecting local measures. They were as necessary and useful at this time as when solely relied upon. When emetics are given, stomach washings should supplement them.

DR. SLAGLES thought that syrups in general should be given up in infantile therapeutics. He could not agree that turpeth mineral was an emetic to be relied upon for habitual employment. It was far too irritating and dangerous, and he would advise its use only as a last resort in membraneous croup.

DR. LOVE, of St. Louis, said that while too little attention had

described. Except that the child was emaciating there was no change since admission.

January 28th, had another spasmodic attack, but this time there was in addition rigidity of the limbs, clenching of the hands and a tendency to opisthotonos.

January 29th, another attack similar to above. On the evening of this day the child was very restless, face flushed. Temperature had risen to 104. There was a considerable increase in the bronchial catarrh.

January 30th, temperature was again normal, and child appeared to be better.

February 1st, temperature again rose to 103.2, and there were now signs of pneumonia. There was rather severe diarrhoea and the head was retracted. There was no rigidity of the cervical muscles. Breathing was much easier when head was well back. When head was pushed forward dyspnœa became more marked and child became cyanosed. The pneumonia increased, and child got gradually more feeble. The dyspnœa was not nearly so marked, and there were now no spasmodic attacks. The temperature was very irregular, the average was about 103, but it varied, on one occasion being as low as 99, whereas at the end it was 105, 106, 107. The case now presented no special features. It was now simply a severe pneumonia and on the 19th of February the child died, temperature being 107.4 F.

Post mortem : The subtracheal glands, and the other glands in this region were enlarged and caseous. One gland on the left side of the trachea just above the left bronchus was about the size of a walnut. It was causing pressure in this region and had ulcerated through the trachea, discharging its caseous material into that tube just at the bifurcation. There was pneumonic consolidation of the lower lobes of both lungs. The mesenteric glands were also enlarged and some of them were caseous. The larynx and pharynx were perfectly normal. The brain was œdematous but otherwise normal.

Remarks: The case presents several points of interest. The usual teaching is that in tracheal obstruction there is *inspiratory* dyspnœa, the head is thrown forward and the chin depressed, and that there is noisy stridor. In the above case the dyspnœa was purely *expiratory*, the head was thrown very far back ; and seldom was there any stridor. When present the stridor was very slight.

The situation of the pressure on, and later the perforation into, the trachea seems to me to explain why the dyspnœa was expiratory, and why th expiration was prolonged and noisy. The right bronchus

was perfectly patent, and therefore the inspired air passed mainly to the right lung. The elastic recoil of the lungs was continually going on, and consequently air from the left lung was pressed out and this through a narrow channel into a wider one. Here then we had the physical conditions necessary to produce prolonged and noisy breathing and they came into play only during the expiratory phase.

However, I wish particularly to refer to the spasmodic attacks. Various explanations may be put forward. The milder early attacks were probably due in part to acute swelling of the mucous membrane at the seat of pressure, and in part to spasm of the muscular tissue of the trachea itself, as mentioned by Dr. Bristowe in the third volume of the "St. Thomas' Hospital Reports."

The more severe attacks seem more likely to have been due either to an actual blockage of the air tubes by some of the caseous material discharged from the gland; or to have been reflex, due to the irritation caused by the discharged material. As reasons for this view I would mention the sudden onset—the short time the actual stoppage of respiration lasted, and the rapid return of the breathing to the condition it was before the attack. It seems to me very probable that the artificial respiration caused the foreign body to be moved onwards and perhaps broken up and thus relieved the urgent symptoms.

The gland had not discharged the whole of its caseous material. Why then should the spasmodic attacks have ceased? It might be said that this was due to a paresis of the nerve endings at the seat of obstruction by the constant irritation, or by the inflammation which was so marked. This may be in part the explanation, but there seems to me to be a simpler and more satisfactory one. The attacks ceased with the onset of head retraction. This retraction would cause elongation of the trachea. The gland which had caused the perforation was adherent to the trachea but not to the vertebral column—whereas the glands in the bifurcation were adherent to both trachea and vertebræ. The trachea was thus fixed at practically the seat of perforation. When the head was retracted the trachea was put on the stretch and the lateral gland was moved a certain distance from the actual aperture; which at the same time was narrowed and elongated. By experiment I found that when the trachea was relaxed the caseous material could quite easily be squeezed into the tube—whereas with the trachea elongated this could not be done.

I take it, therefore, that the retraction was a purely voluntary action on the part of the child.

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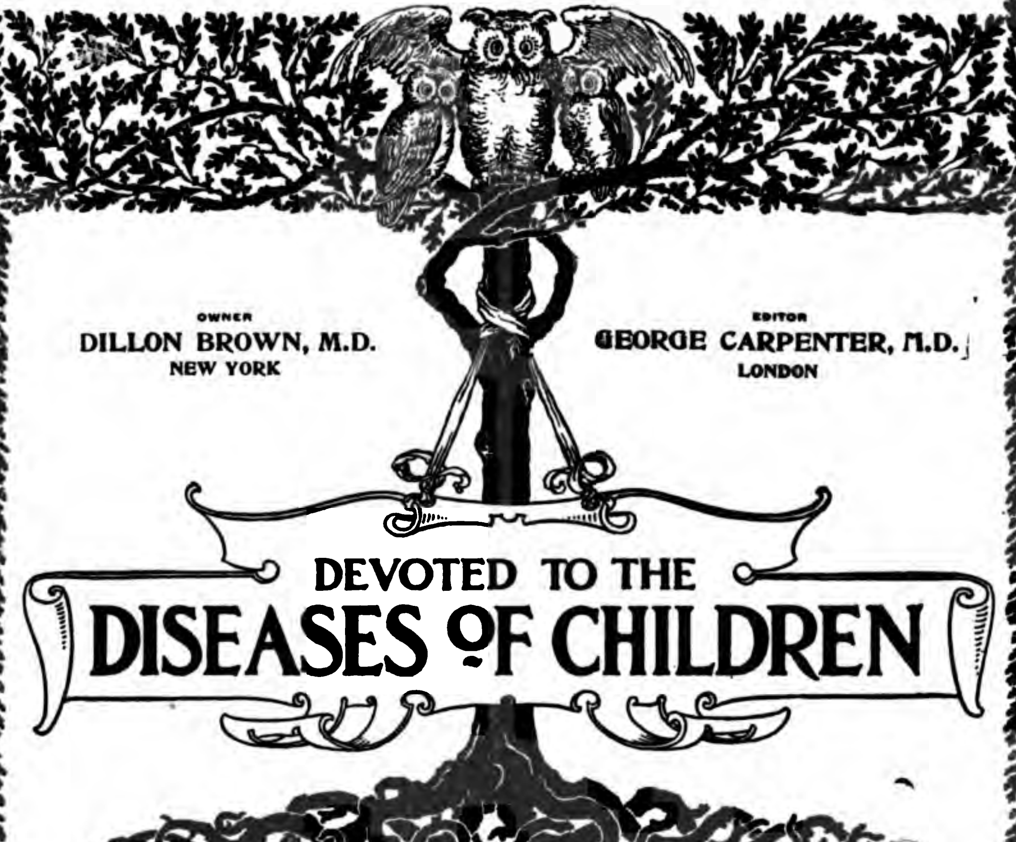

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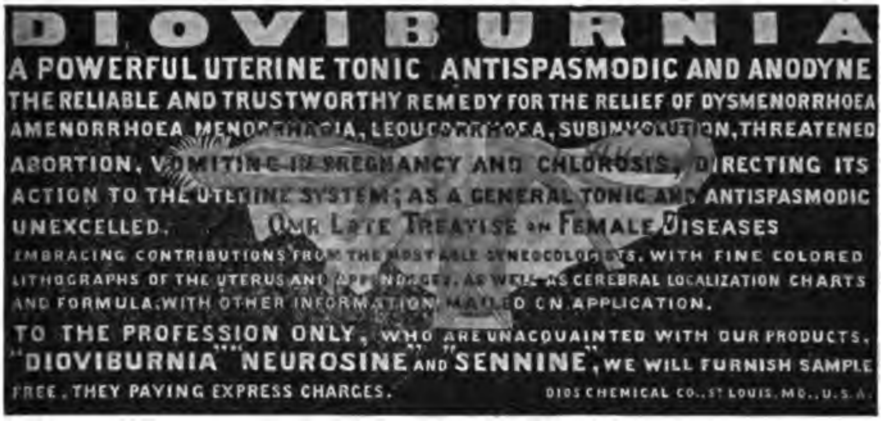

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